Rising energy prices: A briefing

10th February 2008, by Gerry McCartney

Rising prices

The cost of electricity and heating has been steadily increasing above inflation in recent years, with a series of further price hikes in the last two weeks. British Gas has just hiked its gas and electricity prices by 15%, EDF has increased its electricity price by 7.9% and gas by 12.9%, Npower its electricity by 12.7% and its gas by 17.2%.[1] Scottish power has followed by increasing its electricity prices by 14% and gas by 15%.[2]

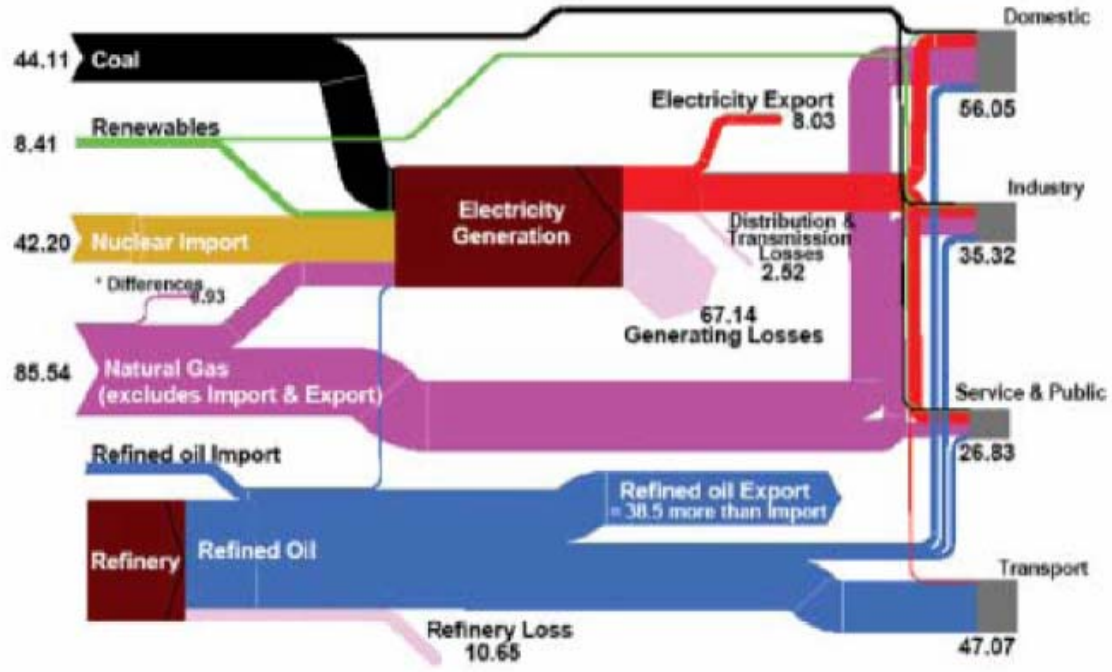
UK and Scottish energy sources

Scotland and the rest of the UK are dependent on different energy sources to generate electricity. About 37% of Scottish electricity is generated from nuclear power (Hunterston B and Torness), 29% from coal (Cockenzie and Longannet), 17% from oil and gas (mostly gas from Peterhead; the Inverkip oil fired station has rarely, if ever, been fired) and 19% from hydroelectric and pump storage. All of these coal and nuclear generators are scheduled to close by 2025.[3]

This contrasts with the UK as a whole which has a higher proportion of electricity produced from coal (37%), gas (36%) and lower proportions from hydro (1%) and nuclear (18%). The UK is now a net importer of both gas and oil, with Russia a major source of piped gas.[4]

The flows of energy in Scotland, including that for electricity generation is shown in Figure 1.

Figure 1 - Energy flows in Scotland (TWh)[5]



The UK market in gas and electricity

During the 1980s and 1990s the production, distribution and sale of electricity and gas was broken up and privatised. An oligopoly now exists in both the electricity and gas markets with six main suppliers (in Scotland two suppliers dominate: Scottish Gas and Scottish Power).

Root causes of rising prices

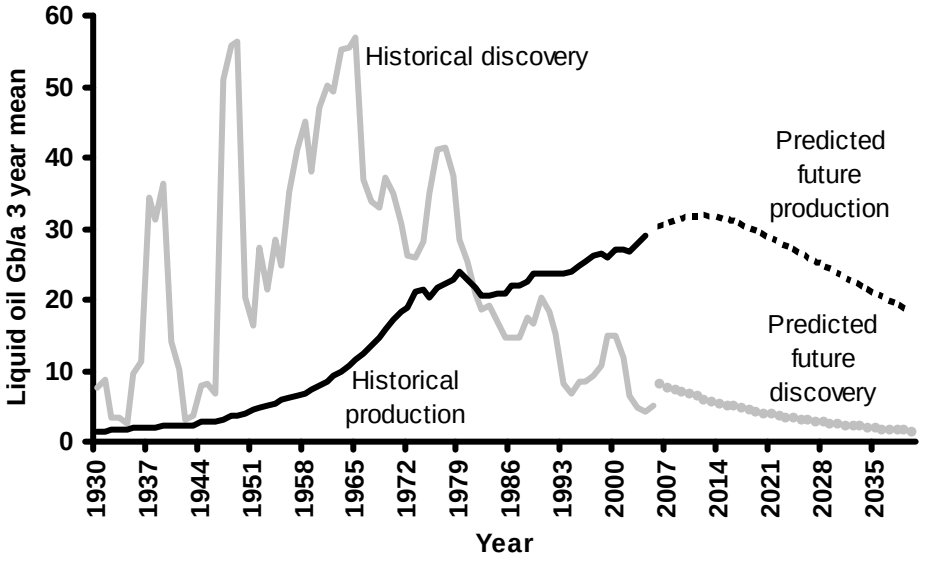
Scarcity (peak gas and peak oil)

The rate of discovery of new supplies of oil and gas has been in decline since the 1970s. Whenever a new 'discovery' of oil is announced with much aplomb on the news this represents an infinitesimal amount in comparison to the finds 30 years ago.

Peak oil (or peak gas) is the inevitable phenomenon seen with all finite resources where the rate of production reaches a peak and reduces year on year thereafter. It is difficult to know exactly when this point of declining production will occur. There is little objective information in the OPEC countries as they are known for their ability to consistently hide their true production figures. The big oil multinationals repeatedly overstate their proven reserves.

There is general agreement (except within OPEC) that oil production will be in decline by 2025 (Figure 2). Importantly though, many analysts are now predicting that oil production will be in decline long before this, and may have already be in decline since 2005.[6] There is less certainty about when a peak will be seen in gas (and uranium),[7] but the difficulty in transporting gas makes even local shortage very important.

Figure 2 - The peak oil phenomenon[8]



As the gap between supply and demand for fossil fuels closes, and ultimately becomes a deficit, the prices that suppliers will be able to charge will rise exponentially. We are very close to this point with both oil and gas.

Market failure and privatisation

If a market is to work it requires perfect information about the market for consumers, easy entry to the market for producers, an ability to easily switch between supplier and multiple producers. The market for energy can never achieve these objectives since it is impossible for new businesses to enter this market. What has been seen since privatisation is mergers of existing suppliers and the development of an oligopoly. This leaves a real risk of collusion between suppliers, something hinted at recently by the independent watchdog Adam Scorer**,** energywatch Director of Campaigns said,

"*Four double digit rises in four weeks won't do much to persuade consumers that this market works in their interest. Four, supposedly cut-throat, competitors have raised their prices by near identical amounts in days of each other. This is a market where companies do not worry about competition for consumers*."[9]

Switching between suppliers is hideously difficult for citizens. Even where access to the internet is available, it is increasingly difficult to make sense of the ever-changing tariffs, special deals and fixed charges. The mantra of government at this time has been to encourage consumers to switch suppliers to the cheapest company. This is a bizarre notion at the time when all suppliers are increasing their prices and there is little clarity about future price hikes. No elected politician takes responsibility for energy prices or the supply of electricity or gas in this privatised market.

Energy inefficiency and ever-rising demand

The consumer boom since the early 1980s has fed a massive increase in demand for heat and electricity. The average temperature inside UK homes has increased; the average house size has increased; the number of electrical gadgets has risen exponentially and the population size has risen. This consumption is unevenly spread across the population with a correlation between income and energy consumption. In addition to the consumer driven demand for energy (through the purchase of ever more energy-consuming items), a large proportion of energy demand is accounted for by waste. Insufficient insulation and wasteful practices, such as leaving lights on, create an unnecessary demand.

Despite this, it is not reasonable to suggest that the introduction of improved energy efficiency could mitigate increasing consumer-led demand. This is the Kazzhoum-Brookes postulate. It describes how any increases in energy efficiency in a market economy merely free resources to increase consumption on other goods.[10]

The WWF has recently concluded that the UK requires a land area three times larger than it inhabits to sustain its current consumption pattern. To achieve sustainability the UK therefore requires a marked reduction in its average consumption level.[11]

Climate change

It is impossible to discuss rising energy prices without including an analysis on climate change. There is scientific consensus that climate change is anthropogenic (man-made) and that the burning of fossil fuels is the major contributor to this.[12] If climate chaos, including the devastation of the living circumstances of hundreds of millions of people is to be averted, then it is necessary to limit the carbon dioxide to less than 450ppm in the atmosphere. Beyond this point, a positive feedback loop is likely to intervene as the permafrost melts releasing frozen methane.[13] This is an unthinkable prospect that could represent collapse of the global ecosystem, threatening the survival of the species.[14]

A framework to achieve sustainable atmospheric conditions and equity has been developed by the global commons institute.[15] This framework, known as contraction and convergence was passed as party policy at the SSP 2006 conference and developed further at the December 2007 National Council.

What should a socialist analysis be?

It is clear that the energy market has failed and energy companies are making obscene profits from a system squewed towards the profiteers. The energy companies, including the producers, distributers and suppliers should be brought into public ownership to provide transparency and accountability to the supply of energy. This would end the extraction of profits from citizens and reduce prices.

However, this alone cannot deliver affordable energy for the future in Scotland. Scarcity of fossil fuels, and the need to drastically reduce our consumption of such fuels to avert climate change (which precludes the use of the plentiful Scottish coal for energy production until carbon capture moves beyond the experimental phase) requires the achievement of fossil fuel independence. This means a quantum shift in transport policy away from cars towards public transport; a relocalisation of the economy; the introduction of a publicly-owned insulation company (perhaps located within local authorities); the rapid development of renewable energy resources and an end to the mindless overconsumption driven by market-led demand

creation (eg for heated greenhouses or LCD televisions). This is best done within a framework of contraction and convergence that ensures that those at the bottom of society can increase their consumption whilst the richest have to reduce theirs. This is facilitated by carbon rationing.

The response of socialists to the challenge of sustainability (including climate change and peak oil) has been discussed further in a discussion pamphlet published by the party this month.[16] This chimes with the development of the ideas of 'ecosocialism'.[17, 18, 19] A set of proposals for a publicly-owned energy industry has been published recently by Andy Cumbers that the party could broadly agree with.[20]

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