

Given the nature of the recent economic recession, has the UK Government missed the opportunity to invest in renewable energy programmes?

MICHAEL BROCK*

The recession that hit during 2008 and 2009 had huge global economic implications and our recovery from it continues to be slow and tentative. This paper will discuss the reasons why, economically, the underlying contributors surrounding the recession and its subsequent effects suited investment in alternative investment technology in the UK, before looking empirically at the British Government's response to the recession with regards to renewable technology proposals. We shall finally conclude by investigating what aspects of the UK economic perspectives require amendment to focus upon alternative energy and the potential benefits its large scale investment could induce.

I. Introduction

Late last month it was announced that, despite six consecutive quarters of contraction, the longest period since 1955, the UK economy finally limped out of recession with 0.1% GDP growth (www.bbc.co.uk/1/hi/8479639.stm). This has led to a tentative bout of optimism as the country begins 2010.

However, this recession has left in its wake a series of questions and scepticisms. Government spending, the trust we place in financial systems and the appropriate level of global integration are headlines which have repetitively dominated the media over the last few months. One question, however, widely eluding the attention of the British public is energy dependency. Temporary oil price stagnation since the global economic slowdown's origin have made the soaring fuel prices, which bombarded the news in the summer of 2008, a distant memory. However, OPEC figures have confirmed that today's oil prices double those of December 2008 and, although nowhere near peak levels of July 2008, these will continue to rise substantially as the world's industrial engines begin to grind again (www.opec.org).

Therefore, whereas the recession diverted attention from the 'far-off' threat of climate change to 'the more urgent priority of stabilising the economy' (FitzRoy & Papyrikis p.162), this paper will firstly analyse how the UK government could have exploited the 2008-2009 recession as an opening to invest

* 3rd year BSc Student in Economics

in alternative energy, before describing the reality of the Government's actions, and finally the reasons for any deviations and the corresponding changes that must occur to align policy with necessity.

II. Why the 2008-2009 recession offered the perfect opportunity for alternative energy investment

2.1 The fall of the construction industry

One of the more distinctive characteristics of this recession was the speed at which the construction industry halted to a spluttering stop.

Table 1: Construction contracts in the UK

2007				2008				2009		
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
12,922	13,934	12,279	11,489	12,212	11,078	10,183	8,150	7,521	9,205	8,925
50,624				41,623				25,651*		
Public Sector: 12,356		24.4%		Public Sector: 14,196		34.1%		Public Sector: 11,748		45.8%

*(4Q estimate - 34,201)

Source: www.statistics.gov.uk/statbase/product.asp?vlnk=720

Table 1 shows not only that construction slowed very abruptly from the summer of 2008, but that the proportion of contracts delivered from the public sector rose significantly and in fact private sector contracts halved, from around 10,000 to 5,000 contracts per quarter, over this period.

These statistics derive two implications for alternative energy investment. The first is that, although a short-sighted viewpoint, the slowing of construction led to falls in energy demand and subsequent oil price descent. This negatively impacted on renewable energy projects, as the focus was no longer associated with providing a viable substitute to the soaring fuels prices. The second implication arose from substantial rises UK construction industry unemployment and skilled workers sat idle as the sector fell away. The recession had granted the UK Government a unique situation whereby these skills could be adapted to alternative energy project construction. Historically, countries like Denmark and Germany have exploited similar opportunities with wind power, investing in 'infant industries' and later transforming into technological leaders in the field. They now dominate world markets in wind technology exports (FitzRoy & Papyrikis p.150).

The 2008-2009 recessions' impact and devastation on the UK construction industry therefore potentially offered Government the chance, by investing in renewable energy infrastructure, not only to reduce skilled unemployment and smooth consumption, but longer term to open up a new promising sector in which to become a global leader.

2.2 The chance to influence public opinion

This recession initially apportioned blame to reckless lending and financing, both directly through UK markets and indirectly through integrated global financial networks, servicing, for example, unsuitable consumers in the USA. A potential stance therefore could be that the UK's economic downturn was not entirely 'our fault'; leading to a surge of questions relating to the trust we place both in our financial systems and our relations with other countries. In many developed countries, attempts of 'protectionist measures', movements promoting a greater degree of self-reliance, were recommended. One such example was the USA's 'Buy American' movement (Stiglitz, p3).

Such methods were quashed for reasons of developing world protection and for long-term sustainability in our globalised world. Although probably the correct decision to arrive at, the UK Government could have manipulated similar methodology, using current public perception to promote alternative energy projects. Through renewable investment, the Government could promote 'UK-made energy' as a subtle protectionist method which would relieve certain foreign ties we no longer wished to be dependent upon. It is widely appreciated that such 'large scale mobilisation of public opinion' is required to meet environmental challenges in future years (FitzRoy & Papyrikis p.162). Such project promotion is evaluated as an 'obvious response' for governments to then provide loans or guarantees for expanding renewable schemes (FitzRoy & Papyrikis p.150).

2.3 Oil price trends and oil security relations

Before the 2008 recession, the rapid fuel price rises had increased hopes that the switch to renewable energy sources would accelerate. (FitzRoy & Papyrikis p.159). However, the recession led to fuel price stabilisation as a consequence of falling global oil demand. Subsequently, UK commodity prices, both direct like petrol and indirect like food, steadied, and calls for a switch cooled substantially.

However, intuition must allow us to appreciate that this stabilisation would only be a temporary response to the economic slowdown. Once recovery began, prices would rise and fuel demand would become fiercely competitive again. Emerging trends certainly envisage this scenario:

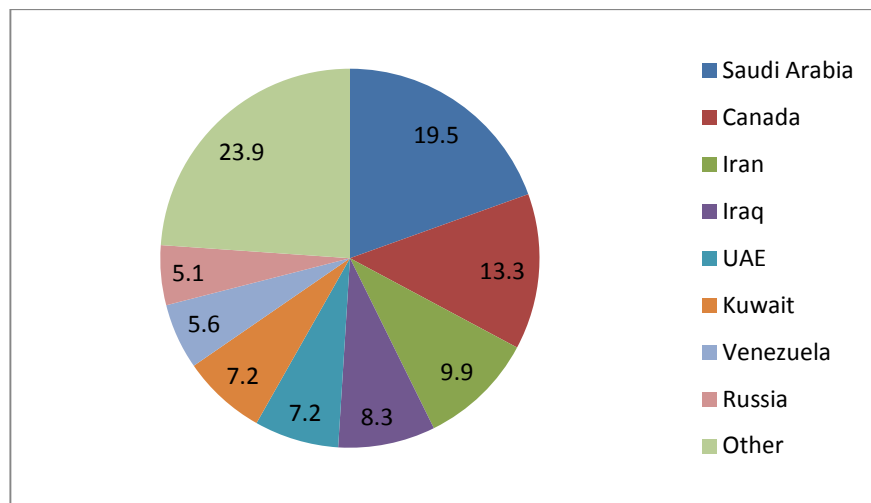
Data analysis offers an obvious policy implication; by investing in alternative energy through 2008, not only would the UK Government be counteracting the future problems predicted, but the energy costs required for construction over this period would have been utilising the depressed 2008 prices and therefore have been significantly lower.



Source: www.opec.org/home/basket.aspx

Figure 1 – Oil Price Trends

An assimilated question is the security of relations between the UK and the main global oil exporters, here demonstrated by the 2005 geography of oil reserves:



Source: www.nationmaster.com/graph/ene_oil_res-energy-oil-reserves

Figure 2 - World Oil Holders (2005)

Looking at the composition of Figure 2, over 75% of global oil reserves are held between eight countries, with over 50% located in Middle Eastern nations with which the UK currently has very tenuous relations. Canada and Russia have supply obligations to neighbouring nations, as well as

having huge domestic demands. We therefore could assume that, long term, the contractual supply of carbon-based fuel to the UK could become very costly or require extensive negotiation.

The overall analysis of oil data is that the UK, during the recent recession, was afforded the option to invest in renewable energy projects whilst prices of current energy resources had stabilised. Moreover, lower global demand at this time meant the UK would not be subject to fuel ransom whilst construction took place, which is a trend that, by remaining bound to fossil fuels, we may encounter severely in future decades.

III. The reasons the UK Government failed to invest in alternative energy

The strategy outlined above seems perfectly plausible but the reality was starkly different in contrast. When commodity prices fell in 2008, so did funding for renewable energy projects (FitzRoy & Papyrikis p.159). The multidimensional explanations are discussed below;

3.1 Falling confidence of the private sector to invest

Already mentioned, a major contributor to falling oil prices in 2008 was a drop in energy demand, globally estimated at 3.5%. The consequential combination of lowered profits and incentives meant utility companies cancelled investments in low-carbon infrastructure and renewable energy capacity (www.businessgreen.com/business-green/news/2253227/recession-hampers-utility). Such private sector reluctance did not encourage Government-based subsidies or contributions and so funding allocated to green infrastructure temporality stalled.

3.2 ‘Misdirection’ of Government spending

The recession’s strain on Government finances were such that even had utility companies requested additional funding, the emerging priority to prevent economic devastation would undoubtedly obstructed such long-term investment. Indeed, Stiglitz explain that most national funding went to ‘bailout’ of the financial institutions who, ironically, had caused the recession in the first place (p.12).

The potential argument follows that the costs of renewable energy projects relative to the magnitude of ‘financial bailout’ expenditure is of such insignificance that it could have almost fallen under the radar. However, these expenditures are by no means substitutes. The UK Government knew safeguarding the financial sector would both prevent widespread economic collapse and speed recovery (through increased confidence and stability), and it is therefore slightly unfair to label this ‘misdirected expenditure’.

However, examples of such ‘misdirection’ did emerge, for reasons of their substitutable nature with renewable energy, such as the continued subsidising of non-renewable energy branches, for example the UK coal industry. This seems highly illogical bearing in mind our evidence of the impending trends.

Another example comes from the car ‘Scrappage Scheme’. Whereas motives are clear, preventing the loss of motoring industry employment which would have exaggerated the crash, the movement is both myopic and irrational. This is aptly evaluated by FitzRoy and Papyrikis, ‘Government intervention to rescue a depressed industry has missed the chance of enforcing a major shift to modern, green technology’ (p.163). By instead investing in a green motoring stimulus, not only would the Government have created long-term employment through new research and design, but this technology would have contributed to preventing us being held at the mercy of the soaring oil prices envisaged to follow the recession.

3.3 The reasons for misdirection – the failure to instil a new public perception

The expenditure patterns witnessed during the 2008-2009 recession all suggest a reluctance to alter energy policy which could be addressed to the British public. There are again varying reasons, and blame can be both directly and indirectly apportioned to the Government.

The first is the difficulties Government may have experienced by attempting to employ a policy change. We previously assumed that the public’s susceptibility at this time to adapt to new perspectives, for example the ‘soft-protectionist’ stance, would work to the Government’s advantage should it propose renewable energy plans. However, such volatility also held the potential to work against the Government. This is because there are ‘unavoidable political costs’ of changing behaviour, which include ‘overcoming the powerful vested interests of lobbies’ (FitzRoy & Papyrikis, p.162). The potential for fossil fuel or motoring industries to visibly protest in response to ‘green infrastructure’ could potentially damage the Government’s reputation in the public domain. This intuition may certainly be a partial explanation to the continuing subsidies to the coal industry, the approach to the ‘Scrappage Scheme’ or to a reluctance of publicly projecting future oil price trends.

A rather more sinister yet equally plausible explanation for UK Government’s composition of expenditure is the recession’s timing in relation to the upcoming election. It is natural for the Government, even when in a recession, to employ policy which will increase their popularity with voters and this is certainly a valid aspect to consider, not only during the recession but as we emerge from it. Despite the negativity surrounding the recession, the expenditure seen very explicitly directs itself at ‘helping the public’; from creating financial stability to maintaining motor industry employment. Whilst costing billions of pounds, these packages were simultaneously aiding the popularity of the Government. Comparatively, a proposal promoting green technology, in a time where energy prices are stable, do not immediately imply individual benefit to the average voter, whose job security or financial stability take far greater precedence. Furthermore, it is important to analyse who such schemes are benefitting; - pension stability, winter fuel subsidies and savings guarantees all advantage a demographic who, whilst constituting a large proportion of the voting population, perhaps have smaller vested interests in fuel prices or energy derivation in twenty years time.

Overall, the opportunities of renewable energy stimulation during the recession and the future issues they could potentially have prevented appeared insignificant to the UK Government for reasons ranging widely both in methodology and plausibility.

IV. What needs to change in order to invest in renewable energy?

We have already established that although the recession created sound foundations for investment in alternative energy, the responses we might have expected to see did not materialise, thus begging the question as to the changes required in economic policy to achieve what would have appeared the desired response.

4.1 A need to measure development accurately

Worldwide, one of economics' ineptitudes is the way in which we encapsulate the idea of wealth. Current economic policy dictates that human beings are perfectly rational and that they follow strict preferences (Sugden, p.3). These preferences are to maximise utility through the obtainment of material wealth. The corresponding measurement mechanism, GDP, incorporates this perception but its accuracy of welfare determination is debatable. Using data from developed nations like the USA between 1960 and 1970, empirically it has been shown that although GDP wealth may grow, proportional 'happiness' gains failed to materialise over this time (Easterlin, p.30). This became known as the Easterlin Paradox. Many resulting explanations have since been suggested, many by Easterlin himself. These range from our care about relative as opposed to nominal wealth to, very relevantly, an inability of GDP to incorporate non-financial contributors to our contentment. This evidence has consequences for our problem. If non-pecuniary facets, such as environmental health, do induce wellbeing, then surely a more inclusive measure of development ought be applied which may lead to more favourable expenditure on things such as renewable energy, which safeguards the environment which we deem as important? One of these potential alternatives is the Happy Planet Index (HPI), invented by the New Economic Foundation (NEF) in 2006 to include 'economics as if people and the planet mattered' (www.happyplanetindex.org).

$$\text{HPI} = \frac{\text{Life Expectancy} \times \text{Life satisfaction (Happy Life Years)}}{\text{Ecological Footprint}} + a$$

Source: (www.happyplanetindex.org/learn/calculating/)

Although it is accepted that this index may be a little too deviant from the GDP measure we currently align development to, such incorporation of a mechanism would undoubtedly invoke larger incentives to invest in more environmentally friendly infrastructure. Certainly, if 'material gain from economic

growth does not induce long term happiness' then why should the GDP levels be so prevalent in the subsequent economic policy we strive to follow (FitzRoy & Papyrikis, p49). In relation to our issue, if the UK Government had instead concentrated its recovery around a more all-encompassing measure of development, as opposed to stimulating GDP growth, it may have been more open to investing in the alternative energy projects.

4.2 The need for appropriate discounting

Another criticism of the Government's current policy infrastructure is that it fails to envisage the implications of its actions, or lack of actions, on the future. Refurbishment to make homes energy efficient in the UK will run between 2012 and 2030 yet this timeframe is believed 'too late to avert dangerous climate change' (FitzRoy & Papyrikis, p163). This myopic approach to environmental damage may be derived not only from obtaining election popularity, but also from inappropriate discounting, whereby the Government fails to attach enough weight to the future and therefore does not respond optimally. Such myopia is certainly not conducive to public persuasion, which we already have established is vital to successfully combat today the problems climate change will pose tomorrow.

4.3 Sustainable expenditure priorities

The 2008-2009 recession saw short-term spending to prevent economic collapse dominating long-term expenditure on tackling issues like climate change. We could potentially justify the reasoning behind this priority, yet realistically there are requirements to concentrate on long-term expenditure timeframes, like alternative energy investment, which reap large future rewards (www.epolitix.com/latest-news/article-detail/newsarticle/recession-may-slow-down-green-energy-plans/). In a succinct but apt analogy, this is a need to act more like an ecologist, basing decisions on extending the whole biosphere's survival as opposed to as an economist, whose concern is immediate human prosperity (FitzRoy & Papyrikis, P.55). The large opportunity induced by the recession may be gone, but the overall policy of the UK Government must now adjust and adapt to not only withstand and counteract industrial lobbies aiming to dissuade public perception against environmental infrastructure, but also infuse confidence into the public that renewable energy is the country's only viable solution for long term sustainability and prosperity.

V. Conclusion

Globally, the strive for economic development has been to the detriment of our environmental health, and subsequently generous investments in renewable technology are proposed by FitzRoy and Papyrikis to 'decouple' economic growth from environmental degradation (p.57). These economists fuel their argument by saying that the 2008-2009 economic downturn offered an 'unprecedented opportunity' for the UK Government to implement such generous large-scale investment (p.162). This is enforced by a number of facets, including falling oil prices and corresponding construction costs, a temporary distrust

of global integration and the potential to reverse increasing unemployment, particularly in the construction sector.

However, against such potential incentives, a combination of expenditure prioritisation, a fall in the confidence of the private sector to invest and an inability to captivate public enlightenment led to a contraction in this technology's construction (www.epolitix.com/latest/news/article-detail/newsarticle/recession-may-slow-down-green-energy-plans/). FitzRoy and Papyrikis, writing in 2010 in an advisory capacity on environmental incorporation into UK economic policy, evaluate this scenario succinctly:

The opportunity for large scale, counter-cyclical job creating investment in energy efficiency has been neglected in spite of all the long-term benefits and lowered costs and emissions'

FitzRoy & Papyrikis (p.150)

A further reality is that, as we now emerge from recession and energy prices rise again, alternative energy will again become a popular investment (FitzRoy & Papyrikis, p.163). These conclusions can be nicely assimilated with those of Shaw in his 1980 publication advising on whether the UK Government should construct the Severn Barrage to enhance tidal energy; 'An ounce of foresight now could save a ton of regrets later' (p.220). Perhaps, in consideration of this investigation's findings, by not applying the ounce of foresight in 2008, the UK Government may be forced to endure the ton of regrets in years to come.

REFERENCES

- EASTERLIN R.A. (1974) 'Does economic growth improve the human lot? Some empirical evidence' Paul A David and Melvin W. Reder (Eds) 'nations households and economic growth: essays in honor of Mozes Abramowitz, New York, Academic press
- FITZROY F. & PAPYRIKIS E. (2010) 'An Introduction to climate change economics and policy' Earthscan Publishers
- SHAW T. (1980) 'An Environmental Appraisal of Tidal Power Stations' Pitman Publishers
- STIGLITZ J. (2009) 'The Global Crisis, Social Protection and Jobs' International Labour Review, Vol. 148 No.1 -2

SUDGEN R. (2009) 'On Nudging: A Review of Nudge: Improving Decisions About Health, Wealth and Happiness by Richard H. Thaler and Cass R. Sunstein' *International Journal of the Economics of Business*, 16(3): 365-373

www.bbc.co.uk

www.businessgreen.com

www.epolitix.com

www.happyplanetindex.org

www.nationmaster.com

www.opec.org

www.statistics.gov.uk