UNISON’S ENERGY PROSPECTUS
PERSPECTIVES ON OUR FUTURE ENERGY
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What have challenges like climate change, fuel poverty and energy security got to do with UNISON? The answer of course is everything. Our members work conscientiously day in day out in the energy sector and have seen the organisations that they work for change out of all recognition over the last 20 years. Many more of our members on low incomes are at the sharp end of rising bills and will have read with genuine anxiety repeated warnings that bills will rise steeply in the years ahead. Other members will act as volunteers for UNISON Welfare, seeking to provide help for members facing fuel poverty. Others still will be active environmental campaigners.

But in addition to this, as a member-led body with a commitment to fairness and social justice, UNISON believes that working people should have an input into decisions about key issues that will impact on their lives. In this sense the issues don’t come much bigger than what should happen next in the energy sector. The policy of our predecessor unions, before the establishment of UNISON, was always set firmly against privatisation. This was because we did not believe that relying on markets, even when regulated, would deliver the wider public interest. In many ways the looming capacity gap and the failure of the sector to come forward with sufficient investment in low-carbon capacity shows we were right.

In this context it’s important that there is now a full and frank public debate about how we achieve clean, secure and affordable energy in the future. This energy prospectus offers a range of different views about how we get there. This is clearly a timely debate and one that we will be contributing energetically in the months ahead – as members that work in the industry and citizens that are so reliant on the service that it provides.

Dave Prentis
General secretary
UNISON
Mike Jeram  
National secretary for business, community and environment, UNISON

Thinking back to the 1980s and early 1990s brings to mind the famous quotation: “The past is like a foreign country. They do things differently there.” Indeed, a casual viewing of the haircuts, the cars and tailoring in TV’s fantasy drama Ashes to Ashes, in which the victim of a shooting is transported back to the 1980s, demonstrates the point in a very entertaining way. But, in a world turned upside down by the financial crisis and the threat of climate change, it is the huge differences in our views of the effectiveness of free markets that give the quote its full dramatic force.

In the 1980s the idea that markets were the answer to all major economic and industrial challenges was rapidly gaining the intellectual and political momentum that would carry it through nearly three decades of policy making. Now such a belief is incomprehensible and energy policy is one major area in which this is increasingly apparent.

As a public services union representing 30,000 members across the energy sector, UNISON has always sought to encourage and engage in key policy debates about the future of the sector from a public interest perspective. In addition, the union’s members are only too well aware of the need for fair and effective policies that will ensure a just transition to a low-carbon economy and an end once and for all to fuel poverty.

It is against this background that our energy prospectus seeks to highlight different perspectives on the energy policy challenges we face from a range of important commentators and organisations. Set out below is a short analysis on how we got to where we are today.

The Thatcher experiment: ideology trumps common sense

For Margaret Thatcher and the Conservatives, energy privatisation in the late 80s was carried out for both ideological and pragmatic reasons. But it was the ideological reasons that dominated. The Tories were inherently hostile to the state. This underpinned their critique that the industry was inefficient and that more competition would lead to innovation, investment and drive efficiency. At the same time privatisation raised money for the exchequer that helped the Conservatives to keep taxes low at the 1992 general election.

Were those who worked in the power industry, and working people more widely, of a similar mind?

At the time of privatisation I was a national official for Nalgo (one of UNISON’s predecessor unions) and I met many members in the industry. They were overwhelmingly against privatisation (a minority refusing to accept the free shares that were offered to staff) but were, rightly, not prepared to try and overturn a democratically elected government’s right to pursue its policy. The unions therefore adopted a pragmatic stance to ensure that our members’ terms and conditions, pensions and health and safety were protected and to this end we had regular meetings with government ministers and civil servants. The industry’s staff stoically endured all the changes, reorganisations and job losses that followed in the wake of privatisation and it is a credit to the people involved that good industrial relations were maintained.

Now, 20 years on, with escalating energy bills and stories of a looming energy crisis in the press, we would argue that workers and the wider public remain pragmatic and that excessive claims for free-market solutions to energy challenges seem like outdated ideology.

Project Discovery – an admission that the experiment isn’t working

Project Discovery is Ofgem’s year-long study into whether Britain’s energy market arrangements are capable of delivering secure and sustainable electricity and gas supplies over the next 10 to 15 years. The conclusions of the report, published in February i, present

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1 L.R. Hartley, The Go-Between, 1953

ii Project Discovery: options for delivering secure and sustainable energy supplies, Ofgem, 2010
a worrying picture that in many respects amounts to an admission that many of the claims made for the merits of privatisation have simply failed to materialise.

The document explains that the current arrangements for the supply of energy in Britain have two main objectives:

— to incentivise the efficient use of the currently available assets, infrastructure and supply sources

— to secure the efficient, cost-effective and timely provision (or extension) of assets, infrastructure and supply sources to deliver acceptable supply security in the face of uncertainty while meeting other policy objectives such as the drive to reduce carbon dioxide emissions.

Whilst Ofgem would have us believe that the arrangements have performed “reasonably well” against both objectives, the report admits that performance hasn’t measured up in terms of bringing forward investment in low-carbon generation and acknowledges critics who argue that:

“Markets have benefited from being until now largely self sufficient in gas and inheriting large capacity margins in electricity at the time of privatisation ... arrangements have been effective in sweating existing assets, and bringing forward relatively low-capital cost investment such as combined-cycle gas turbine (CCGT) plant, but are not yet proven in bringing forward large-scale investments.”

The report does seek to balance these criticisms to a degree by pointing to the 30 GW of new generating capacity and the 125 bcm/yr of new gas-import capacity and storage that have been introduced over the last 20 years. However, this hardly presents a picture of stability when placed next to the report’s overall headline projection that £200 billion of investment might be needed by 2020 and that leaving arrangements as they stand is not in the interests of consumers. This is because the market as it stands is unable to cope with a number of what Ofgem calls “concerns”:

— the high cost and lack of availability of finance caused by uncertainties around the energy market and wider economic crisis

— a market structure that does not incentivise stability of supply and costs

— uncertainty around the carbon price caused by factors such as the recession and the failure of world leaders to agree a deal at Copenhagen

— lack of investment signals in generation that might well encourage companies to invest in more gas (CCGT) due to its relative lack of exposure to carbon markets, lower capital costs and speed of development. This could make us more dependent on gas imports and lock us into higher carbon emissions for a longer period

— issues around current complicated market ‘rules’ that might not result in the optimum short-term price signals and, as a consequence, reduce demand-side responses.

Ofgem’s analysis could perhaps be characterised as an admission that we are in a hole and that we should stop digging. Their conclusions are that more investment is urgently needed, costs will increase if we do not act now, price signals aren’t working, Britain is vulnerable to international market factors that undermine security of supply and increasing numbers of consumers are going to face affordability issues which will impact on fuel poverty and the competitiveness of commercial users.

Where next for energy policy?

So where next for energy policy? What would be a common-sense policy response that would provide us with secure, affordable and low-carbon energy? And for us, as a union, what would be the best response for those that work in the industry?

Ofgem has developed a range of options for the policy makers to consider. At the ‘do-as-little-as-possible’ end of the scale it recommends ‘targeted’ market reforms, such as a minimum carbon price and measures to improve price signals. At the more ‘radical’ end, and if all else fails, it suggests that the establishment of a “central energy buyer” could be an option. This would aim to deliver security of supply and decarbonisation by co-ordinating all future investment through a single body. The central energy buyer would act as a broker that buys all output from generators and sells it to suppliers under standard terms. By entering into long-term agreements with generators it would be able to determine the future generation mix.

The consultation on Project Discovery is still running and the government’s response remains to be seen. But Ed Miliband, the Secretary of State for Energy and Climate
Change, has already been clear that Britain will need a more interventionist energy policy in the future and an initial range of measures has already begun. The energy suppliers too recognise that change has to come.

There remain, predictably, differences of view on key issues such as the energy mix, the extent of decentralisation, ownership and types of intervention. And there will be very different views about the extent to which the different options that Ofgem themselves have identified measure up. UNISON’s formal policy position, reaffirmed at its national delegate conference in 2006, is, ultimately, for the renationalisation of the industry. This prospectus isn’t going to resolve these issues. What it does do, however, is highlight the need for a genuine debate about the way forward and demonstrate that the energy challenges that we face and the policy options that might help resolve them are now far more varied and complex than when the industry was privatised 20 years ago. If there is a consensus amongst the contributors that those who took part in the debates about privatisation 20 years ago might recognise it is that the status quo is not an option and that energy policy needs to serve the national interest in a way that it clearly is not at the present time.

Contributions to this report

In the next chapter Malcolm Sawyer who, along with the late Kathy O’Donnell, wrote a book for UNISON on the future of public ownership in 1999, considers what the lessons are from privatisation. Whilst noting that the performance of the energy sector has not met the claims advanced by the advocates of privatisation and liberalisation, he points out that the policy framework of the EU places limits on the form and role of public and social ownership in the energy sector. In this context public ownership could take the form of the ownership of one or more companies that are in competition with private companies. He suggests that at a minimum it could be said that public ownership would be as efficient as private ownership in the energy sector.

Rachel Cary from Green Alliance then makes a convincing argument for the UK to use the switch to low-carbon energy as an opportunity to create jobs and boost manufacturing. This will require firmer leadership from the government and the public sector, as well as new finance. The chapter also makes the case for a green investment bank, with government-backed loans to support low-carbon projects.

The chapter from Gavin Hayes and Neil Lawson from Compass suggests we need to fundamentally rethink the ownership model for the future so that we can guarantee greater democracy, equality and sustainability. They suggest that we need to challenge the dominance of the UK’s energy oligopoly by moving away from a highly centralised ownership model. This would involve the government embarking on a mass programme of micro-generation and energy efficiency and giving individuals and households the opportunity to become energy producers as well as simply passive energy consumers. In addition to this the government should promote new forms of community energy ownership – including encouraging co-operatives and mutuels.

Lord Whitty’s chapter makes a careful analysis of the role of the regulator and concludes that we should consider putting in place an energy agency that takes a more rounded role than that currently performed by Ofgem. This would address ever more important social and environmental issues such fuel poverty and energy efficiency.

Colin Meech, head of UNISON’s capital stewardship programme, highlights the significance of union member pension funds in discussions about the future and the ownership of the energy sector. As the capital stewardship programme demonstrates, workers can exert significant influence over social, environmental and governance issues through being active members of their pension funds.

Lord Smith places the need for decarbonisation of the energy sector in the context of the work of the Environment Agency and the wider suite of climate change mitigation policies.

In the final chapter Ann Pettifor highlights the Green New Deal perspective that we need a joined-up approach to the economics of the challenges of climate change, peak oil and financial crisis. This should involve a programme of quantitative easing to fund direct investment in an extensive expansion of renewables capacity and a massive energy-efficiency programme such that we end up with “every building a power station”. The chapter suggests that this would involve tens of millions of properties and would require a £50-billion-plus per year crash programme to be implemented as widely and rapidly as possible: “a call to action as urgent and far-reaching as the US New Deal in the 1930s and the mobilisation for war in 1939”.

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Lessons learnt from privatisation and liberalisation

The privatisation of the UK energy sector dates in general from the 1980s. Privatisation was advocated for a range of motives and reasons including undermining trade union power, promoting share ownership and helping with the budget deficit. But one of the major arguments was based on the notions of inefficiency of production and distribution under public ownership and of efficiency under private ownership. However, it was also argued that liberalisation and competition would be particularly significant, and that whilst liberalisation could be enacted within the context of public ownership it was felt that was unlikely to occur. In the case of the energy sector, a regulatory regime was initially put into place which placed price caps on energy prices, but these were removed as competition was deemed to have evolved sufficiently. Privatisation was accompanied by liberalisation, and particularly within the context of the European Union, the liberalisation of the energy sector (along with a range of other sectors previously considered public utilities) has developed apace, and those processes of liberalisation would be the major constraint facing changes in ownership in the energy sector.

Privatisation and liberalisation

The policies of liberalisation in the UK chimed in with those being developed within the EU. The EU writes as follows: "During the 1990s, when most of the national electricity and natural gas markets were still monopolised, the EU and the member states decided to open these markets to competition gradually. In particular, the EU decided to:

— distinguish clearly between competitive parts of the industry (eg supply to customers) and non-competitive parts (eg operation of the networks)

— oblige the operators of the non-competitive parts of the industry (eg the networks and other infrastructure) to allow third parties to have access to the infrastructure

— free up the supply side of the market (eg remove barriers preventing alternative suppliers from importing or producing energy)

— introduce independent regulators to monitor the sector." (http://ec.europa.eu/competition/sectors/energy/overview_en.html)

Budget deficits ownership of shares

The privatisation of the energy companies (as with a number of others) involved elements of using the sales to encourage the ‘property-owning democracy’ and wider share ownership – the ‘Tell Sid’ campaign and the discounted price of the shares on offer. The receipts from privatisation were also viewed as a means of reducing the budget deficit. These remarks are now more relevant with regard to the present public ownership of major parts of the clearing banks than to the future of the energy sector. It should though be remarked that within a few years of sale, shares bought by ‘Sid’ had generally been sold on to financial institutions (so that the proportion of shares in privatised companies owned by individuals came to be around the same as the proportion in companies in general). The direct decline in share ownership by individuals continued. More significantly, many of the energy companies were acquired by other companies, generally foreign-owned energy companies, so that mergers and foreign ownership were the results.

The receipts gained from privatisation were significantly less than their value, and the taxpayers in effect lost out. The manner in which privatisation receipts were recorded, as the equivalent of negative expenditure and contributing to a reduction in the national debt, did not reflect the impact of privatisation. As far as the public sector is concerned, privatisation reduces its assets (through sale) alongside reducing debt. But as the assets were typically sold at a significant discount and hence undervalued, the public sector lost out.

The relevance of these remarks for the future is two-fold. First, any future nationalisation would, in general, not involve purchase of shares from individuals, but would likely involve the reacquisition of companies that are now part of international conglomerates. Second, accounted for correctly, nationalisation would increase the debt of the public sector but at the same time raise the assets of the public sector, and leave the net worth of the public sector unchanged.
Competition and concentration of energy companies ownership

Privatisation involved the separate sale of a range of companies with the intention of generating competition: this was notable in the case of the electricity sector with the regional electricity companies, which were then able to enter into each other’s market areas and create some competition by offering alternative energy suppliers first to firms and later to households. But the independence of the electricity retail companies was generally short lived. There were soon mergers between the companies and many companies were acquired by multinational companies. Privatisation led in effect to the loss of domestic ownership of most of the energy sector, which can raise issues for the effective regulation of the energy sector. Thomas recently described the result: “all the [electricity] retail companies and almost all of the independent generators were quickly swept up by six large companies. The result is that Britain is now made up of six regional ‘duopolies’, in which 90% of the market is controlled by the former regional monopoly company and British Gas, which has made significant inroads into the electricity market selling electricity and gas as a package. Expecting a market in which just two companies account for 90% of sales to be competitive is not realistic” (Thomas, 2010, p.16). This type of experience mirrors what has happened elsewhere in the EU, where the conclusion can be drawn that “liberalisation in European markets has not led, at least at the moment, to a tougher competition. Experience shows that if a market has to be successful it is not enough with some liberalising norms, it is essential for the industry and market structure to be pro-competitive. Then, the concentration problem is currently the most important obstacle for the development of more effective competition. This concentration, both vertical and horizontal, has been increased by the merger and takeover processes adopted by the sector’s largest companies, thus showing that member states have not wanted or managed to tackle efficiently enough the major of the market structure. Europe started from a rather uncompetitive oligopolistic structure, accentuated with liberalisation, since the performance of companies, both private and state owned has not brought about more competition, but more concentration” (Gálvez, González, and Velasco, 2008).

Since much weight was placed on the role of competition in generating efficiency and lower prices, these types of outcomes may cast some doubts on the relevance of those propositions. It may also help to understand some of the empirical results referred to below.

Efficiency and prices

The idea that public ownership could be equated with inefficiency and private ownership with efficiency played a significant role in preparing the ground for privatisation. Before and after privatisation the debates over the relative efficiencies of public ownership versus private ownership have continued. Studies on the prices under privatisation have had to take into account that the price of gas and electricity are heavily dependent on the costs of gas, oil and coal, and in turn those prices are largely determined in the international markets and subject to considerable fluctuations. In the first decade or so of privatisation, energy prices fell relative to other prices: for example, between 1990 and 2001, gas prices rose by 7.3% and electricity prices by 4.8%, whilst the retail price index rose 37.4%. Since 2001, gas and electricity prices have, of course, risen very much faster than prices in general.

Some early estimates, relating to the privatisation of the Central Electricity Generating Board concluded that there were gains from privatisation, though the gains largely went to the producers and not to consumers. “The main benefits came from generator efficiency gains, switching from nuclear power, and lower emissions. The main costs came from higher prices for imported French electricity, the cost of restructuring and premature investment in new gas-fired generating plant. Our central estimate is a permanent cost reduction of 5% per year, equivalent to an extra 40% return on assets. Consumers and government lose, and producers gain more than the cost reduction” (Newbery and Pollitt, 1997, p 269).

However, a few years later a study on electricity prices in general and making full allowance for changes in fuel costs found that “privatisation may well have resulted in prices that are significantly in excess of the prices that might have been charged with continued public ownership. This would imply that privatisation has failed to live up to the promises of successive governments, who have stated that consumers have benefited from this process. Indeed the results also intimate that it is the domestic consumers who have born the heaviest burden, since they have endured the higher relative price rises. This bias is also borne out in the paper’s analysis of industry profits, which reveals that sales to domestic consumers account for 61.65% of total profits but only 35% of sales” (Branston, 2000, p 43).

A direct comparison of prices under private and public ownership can be obtained from a comparison of British and
French experience during the 1990s. “Following privatisation, electricity prices in the UK performed no better than in other countries, such as France, which did not privatise. The only significant price benefits were for the largest industrial consumers. Although there was a reduction in costs after privatisation (about 5%) this was more than offset by the increase in profits. The distribution of benefits has been unequal, with shareholders gaining most: companies have been able to make excessive returns, despite regulation” (de Oliveira and Tolmasquin 2004, Buckland and Fraser 2002, Hall, Thomas and Corral, 2009, p 4).

A study which related to the more general European experience on privatisation and liberalisation concluded that: “if we consider both aggregate country data on prices, or micro-data on consumers’ satisfaction, public ownership tends either to be statistically associated or to be associated with decreasing prices and higher consumers’ satisfaction; unbundling tends to increase prices (or to be not significant) and to lower consumers’ satisfaction; entry barriers, as can be expected, perhaps do decrease prices, but the consumers are not convinced. Input costs, country-specific features, and other country controls, have in general higher explanatory power than regulatory variables. Results on quality are less easy to interpret, but again do not provide a clear support to the reform paradigm” (Fiorio, Florio and Doronzo, 2008).

A general conclusion covering the European experience is that “regarding prices paid by final consumers although at the beginning of the liberalisation process prices decreased once the initial effect passed off, they started to rise partly offsetting previous reductions” (Gálvez, González, and Velasco, 2008).

“The idea that changing ownership from public to private would be sufficient to improve performance can be easily dismissed. What little evidence there is on the relative performance of privately-owned and publicly-owned utilities shows no evidence of any superiority of private over public” (Thomas, 2010, p 13).

These (and other) studies appear to suggest that in so far as there are efficiency gains from privatisation then the benefits largely arise to the firms (in the forms of higher profits), and as pointed out in Newbery and Pollitt (1997) when those firms are foreign-owned then those profits flow overseas. But Thomas (2010) calls even those efficiency gains into question as quoted above. The other studies mentioned above suggest that prices are not in general lower under privatisation (than they would be under public ownership).

Regulation, prices and the security of supply

The initial regulation of the energy sector focused on price, and the ‘retail price index – x’ approach to the rate of increase of energy prices. In the energy sectors, the setting was for initial price regulation applied whilst the previous public-owned statutory monopolies retained a dominant market share, but to pave the way for competition to ‘break out’. The regional electricity companies became sellers of electricity in the markets of other regional companies, for example. When entry into the gas and electricity supply industries was deemed significant, price regulation of much of those industries gradually came to an end.

Ofgem’s web page summarises its role as including “ensuring that Britain’s energy wholesale and supply markets are competitive”.

The wholesale markets are where energy suppliers purchase gas and electricity for their customers. More than half of domestic bills and a quarter of business customers’ bills are made up of wholesale energy costs.

Ofgem monitors prices paid by customers for energy in the retail supply markets and produces regular reports on competition in the retail sector, covering customer switching and other indicators.

Increasingly Britain is becoming part of Europe’s gas and electricity market and the competitiveness of the UK market depends greatly on what strides forward European countries can make in opening up their own markets to competition. Ofgem is a strong supporter of the European Commission’s drive to liberalise EU energy markets and members of Ofgem’s markets team have been seconded to support the Commission’s work, according to the Ofgem website.

The regulatory framework focused on the regulation of prices. The evidence cited above on prices, costs and profits could be read as indicating that it was not entirely successful. Regulation of price has largely disappeared, and in that sense the experience of regulation is largely of historic interest. But it may be of future relevance if re-regulation was considered as an option. The operation of regulation always raises issues of the availability of information to the regulator, the relationship between the regulator and the regulated (the possibilities of ‘regulatory capture’), and structural changes in the industry being regulated (for example mergers), which make the relationship between relevant costs and prices more complex. But a major
issue here is whether regulation can address the more crucial issues for the energy sector such as the security of supply, sufficient investment and environmental concerns.

On security of supply, Thomas has pointed to impact of competition on risk. “This leads to perhaps what is the greatest danger with electricity liberalisation. If there are no safeguards against market failure, security of supply is in danger because there will be no way to ensure there are sufficient power stations to meet demand. In a free market, no company has (or can have) a duty to ensure security of supply” (Thomas, 2010, p14).

Ofgem recently also raised concerns over the security of supply, when it listed five key issues (Project Discovery, p 1):

- there is a need for unprecedented levels of investment to be sustained over many years in difficult financial conditions and against a background of increased risk and uncertainty

- the uncertainty in future carbon prices is likely to delay or deter investment in low-carbon technology and lead to greater decarbonisation costs in the future

- short-term price signals at times of system stress do not fully reflect the value that customers place on supply security, which may mean that the incentives to make additional peak energy supplies available and to invest in peaking capacity are not strong enough

- interdependence with international markets exposes the UK to a range of additional risks that may undermine security of supply.

- the higher cost of gas and electricity may mean that increasing numbers of consumers are not able to afford adequate levels of energy to meet their requirements and that the competitiveness of industry and business is affected.’

The European Union dimension

The quote from the EU website given in on page 7 indicates that the general thrust of EU policy for the energy sector has been backed up by directives. In one sense it could be argued that EU policy has not impacted on the UK in that those types of policies had already been adopted, and clearly in respect of privatisation and liberalisation the UK government has been an initiator and a keen advocate. But those EU policies do form a substantial constraint on what policy alternatives could be developed. In principle, the EU liberalisation policies are neutral with respect to ownership forms, whether public, private or social, and hence in themselves do not prevent the nationalisation of a range of energy companies and/or the creation of social forms of ownership in the energy sector. But the directives would preclude any return to the statutory monopoly position of the nationalised energy companies prior to the 1980s. They would also place severe limitations on any attempts to recreate vertically integrated operations. The ‘single market’ within the EU underpins the cross-border supply of energy, the entry of energy companies from one national jurisdiction into others, and the emergence of what may be seen as European rather than national energy companies. Yet differences in the structures of national energy markets remain, including different roles for public and private ownership.

Concluding comments

The performance of the energy sector has not met the claims advanced by the advocates of privatisation and liberalisation. The initial regulatory regime over prices, which had rather limited success in constraining prices, has in effect moved to a regulation through competition rather than regulatory authority. The liberalisation policies of the EU place severe limits on the form and role of public and social ownership in the energy sector (and indeed other public utilities). Public ownership would take the form of the ownership of one or more companies that are in competition with private companies, and with limited exceptions would not have any statutory monopoly position. But, at a minimum, it could be said that public ownership would be as efficient as private ownership in the energy sector. Public ownership in the energy sector should be further considered in terms of how it could contribute to lower prices for consumers with lower profits being extracted. Public ownership should also be seen as leading to the publicly owned company behaving in ways which are significantly different from privately owned companies. Environmental responsibilities and ensuring security of supply through high levels of investment would stand out in that respect.
References

Newbery, D.M. and Pollitt, M.G. (1997), ‘The restructuring and privatisation of Britain’s CEGB: was it worth it?’, Journal of Industrial Economics Volume XLV September 1997 No. 3
OFGEM (2010), Project Discovery: Options for delivering secure and sustainable energy supplies
The environmental challenge of a ‘just transition’

Rachel Cary  
Senior policy advisor, Green Alliance

We need to make a radical change to our energy system over the coming decades. Concern over the local and regional environmental impacts of fossil-fuel use and the need to act against dangerous climate change means that the amount and type of energy that we use has to change.

The UK has dwindling indigenous fossil-fuel supplies and in 2004 we moved to being a net importer of natural gas (US Energy Information Administration: Independent Statistics and Analysis, 2006). A failure to move away from fossil-fuel dependence will leave us exposed to increasingly volatile oil and gas prices, making our economy more vulnerable over time. In addition, fuel poverty remains a real problem in the UK and a large proportion of our housing stock is very energy inefficient. Relying on increasingly expensive fossil fuels and failing to address the way we use energy in our homes will only exacerbate this problem. Changing our energy systems is therefore not an environmental issue alone; it is vital for ensuring economic and social sustainability.

We should seize the opportunity to reduce our energy bills and switch to more secure and sustainable energy sources, rather than fighting to maintain the status quo. In order to ensure a ‘just transition’, it will be important to work to identify the opportunities for UK workers as we move to a new energy system and minimise any negative repercussions. It will also be important to ensure that benefits to energy consumers are maximised and vulnerable groups are protected.

Ensuring we don’t miss the boat

Our energy transition is framed by legally binding targets. Energy is the largest source of man-made greenhouse-gas emissions in the UK. In order to achieve the UK’s target of an 80% reduction in greenhouse-gas emissions by 2050, both the amount of energy we use for a given activity and the carbon intensity of the energy we use will need to decline.

The EU has committed itself to a 20% reduction in energy consumption by 2020. This will mean that less energy will need to be used across all parts of the energy chain, from power generation to electricity end use. The carbon intensity of the energy we use will also need to change. The UK is legally committed to its share of the European target to have 20% of all energy (power, heat and transport) from renewable sources by 2020. This will involve a massive increase in our use of renewable power, heat and transport fuels. For example renewable power will need to increase from only 5% of electricity generation now to 30% by 2020. (DECC, 2009, Renewable Energy Strategy.)

It is vital that the achievement of these targets is seen as an opportunity rather than a threat. Countries that have embraced low-carbon technologies by stimulating the market through government support have reaped the benefits, creating new jobs and diversifying indigenous manufacturing. Early action also enables the different sectors to prepare. If we drag our heels and wait until the last minute to adopt new types of energy, we will need to rush the transition and look to other countries to provide the expertise and products we will need. This will be more costly and painful for everyone involved and we will have missed the opportunity to develop useful expertise within the UK’s workforce and develop our manufacturing base.

Tough targets represent real opportunity

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Below we consider the role of the public sector and how we might finance the transition to a low-carbon energy system. We also consider what might prevent the development of the renewable energy and Carbon Capture and Storage (CCS) industry in the UK.

Role of the public sector

There are a number of ways in which the public sector has a unique opportunity to increase the likelihood of a successful transition. For example, even where investments such as investing in energy efficiency result in savings, they often have too long a payback to attract private finance, whereas the rates of return that are acceptable in the public sector are far lower.
Public bodies can help improve investor confidence by being early adopters. By entering into long-term heat contracts, the public sector can provide ‘anchor’ loads that give developers sufficient confidence over heat demand to develop renewable or low carbon heat infrastructure. Other users can then be added to the network later on.

The public sector has significant influence on the technologies and practices that are adopted as it is a large employer and procurer of goods and services. In recognition of this, the NHS has adopted ambitious carbon-reduction targets for energy, transport and procurement.

The need for green finance

Through its sustainable economy work, Green Alliance has been pushing for the use of economic levers to drive the transition. Greater use of environmental taxes will be important, raising money and encouraging low-carbon behaviour. New tools such as green bonds and saving could also play a role. As discussed in Anne Pettifor’s chapter we need to redirect public money into low-carbon projects that create jobs and make our economy more resilient. However it’s not all about spending. We recently did some work on the savings the treasury could make if it stopped putting public money into high-carbon areas such as road building.

Significant private finance also needs to be secured, however many developers have found it hard to secure finance for renewable projects during the recession. Energy companies considering large schemes have been put off by this challenge. This leaves little hope for the kind of small, community-level schemes that have great potential to secure renewable generation, whilst engaging communities in taking collective action on climate change. A number of groups including Green Alliance have been calling for the establishment of a Green Infrastructure or Investment Bank which could offer government-backed, affordable loans to low-carbon projects. It could also provide expert advice to those without sufficient financial knowledge.

Overcoming barriers to renewable electricity and heat

The uptake of renewable energy in the UK so far has been disappointing. The government has been criticised for failing to introduce effective policies to drive the uptake of renewable electricity and heat. The main support mechanism for renewable electricity in the UK, the Renewables Obligation, is an increasingly complicated policy that allows suppliers to buy their way out of trouble. Countries that have been more successful in driving renewable generation have been those that introduced feed-in tariffs (FIT) such as Germany and Spain that provide a guaranteed price for every unit of renewable electricity produced. The UK government is introducing an FIT for small electricity generators from next April. However, many fear that the tariff levels have been set too low to stimulate much interest.

As well as strengthening the policy instruments to drive investments in renewable electricity, the overall structure of the electricity market may need to be altered. In its first progress report, the Committee on Climate Change (CCC) urged the government to review current market arrangements so that they were more favourable to low-carbon generators.

Non-financial barriers such as problems getting planning permission or timely and affordable access to the electricity transmission network have put off or stalled many renewable electricity projects. Local objections to renewable projects, notably onshore wind, have had a real impact on the development of the sector. Many projects have been rejected due to concerns over noise, local wildlife and visual impact. Some of the tensions could have been avoided through better siting of projects or through earlier engagement with the local population. However a number of myths have gained momentum and further education and involvement of local people needs to take place. We need to increase the number of community-owned renewable projects so that local people benefit as well as large energy companies.

To streamline the planning process, government has introduced a new independent body, the Infrastructure Planning Commission (IPC), and has recently brought out draft national policy statements to guide the commission in its decisions. However, some environmental groups are concerned about the ability of stakeholders to engage in the process and the way it accounts for the carbon impact of large energy infrastructure. It is not clear whether the IPC will be able to resolve some of the tensions that have resulted in many energy projects failing to obtain planning permission. In addition the IPC will only consider projects above 50MW; this means that the
majority of onshore wind projects will fall below this threshold and will not be covered by the new process.

Problems getting timely and affordable access to the transmission networks have also delayed projects and may have put some investors off all together. Government has introduced interim measures to try and speed up the connection of the queue of new capacity totalling 60GW that has developed and has recently consulted on longer-term arrangements to try and improve the situation. It is essential that arrangements that do not penalise renewable generators are put in place quickly. More work may also need to be done to improve the way smaller renewable projects gain access to the distribution networks. The issue of who pays for connection to the electricity networks and how users are charged on an annual basis may also need further explored.

There are also a number of changes that will be required to ensure that the renewable heat market develops in a timely manner. Government is introducing financial support for renewable-heat projects in 2011 and hopes that everyone from householders to large industrial sites will install renewable heat technology. However much work needs to be done before then, to make everyone more aware of renewable heat technologies and to train the whole supply chain. Concerns over biomass sourcing and air quality need to be addressed quickly.

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The role of ‘clean coal’

Coal-fired power generation causes a number of environmental problems. Issues range from the production of poisonous heavy metals such as mercury during coal extraction and combustion, to the wide range of nasty air emissions produced from coal-fired power stations. Coal is very carbon intensive and coal-fired power stations are a major source of global man-made CO2 emissions.

‘Clean coal’ technology refers to technology that reduces the environmental impact of coal combustion. It includes technology that removes some of sulphur dioxide emissions produced by coal-fired power stations that lead to acid rain.

It also includes Carbon Capture and Storage (CCS) technology that is currently being developed around the world. CCS refers to technology that captures the CO2 emissions from power stations or industrial processes and buries it in depleted oil or gas fields or in aquifers under the ground or sea.

However both desulphurisation and CCS reduce the efficiency of coal-fired power stations, meaning more coal needs to be burnt to produce the same amount of electricity. Reducing emissions of sulphur dioxide and CO2 from coal-fired power stations therefore increases the amount of other pollutants produced per unit of electricity. As such there is no such thing as entirely ‘clean coal’.

However whilst ‘peak oil’ threatens to end our supplies of cheap oil and gas, coal remains an abundant and cheap energy source. The USA, Australia, China and India all have large reserves of coal and are likely to continue to burn large amounts of it over the decades to come. Ensuring that the technology to capture carbon from coal-fired power stations is developed and widely deployed will therefore be essential if we are to tackle global carbon emissions.

In the UK we are blessed with the right infrastructure to bury carbon – depleted oil and gas fields in the North Sea – and we have many of the engineering and specialist skills required in our oil and gas workforces.

The government has developed a ‘clean coal’ policy to try and ensure CCS technology is demonstrated in the UK on existing or new coal-fired power stations. The Treasury has recently announced that four demonstration plants are going to be developed, funded through a tax on electricity suppliers. There is concern, however, that the technology will require further financial support if it is to be widely deployed in the UK. Further regulations may need to be developed to force energy companies to fit CCS onto new and existing coal and gas power stations.

How will the energy shift affect the job market?

The shift to a low-carbon energy system will have impacts on jobs across all steps of the energy chain, from the manufacturing of clean-technology equipment through to the decommissioning of wind farms and nuclear power stations at the end of their lives.

It will also increasingly involve the participation of end users. New roles are appearing across the public and commercial sectors to manage the carbon emissions associated with the buildings and transport fleet of organisations covered by the forthcoming Carbon Reduction Commitment (CRC). However all staff will need to help implement carbon management programmes and become more aware of their energy use in their day-
to-day operations. Educational jobs will be increasingly important as we seek to engage householders with their energy use and get them to become renewable electricity and heat producers themselves.

Over time, jobs will increase in some areas and decline in others. It will be important to predict and prepare for the changes, to maximise opportunities and to ensure a smooth transition. Where possible, government should signal future regulation as soon as possible to give industry sufficient time to prepare. This will also increase investor confidence so that multinationals invest in the UK and not elsewhere. As mentioned above, it is vital that we don’t find ourselves reliant on overseas expertise and manufacturing through a failure to foster those jobs and skills here in the UK as we work on the transition to a low-carbon economy.

In some areas the move to a low-carbon economy will need significantly more workers, for example we will need a growing number of energy assessors to inspect homes and commercial properties as we roll out Energy Performance Certificates (EPCs). The national retrofit of British homes we desperately need will require local delivery and, in many cases, staff with local knowledge of the communities they are working in. The ‘great British refurb’ is no easy task and will depend on people with the right skills being available to help to make it a reality. This highlights the role of the skills councils in assessing the low-carbon skills that our ambitions will require and significantly ramping up their provision.

It will also be important to identify where existing jobs will remain but where skills will need to broaden. For example boiler installers and plumbers used to conventional systems will need to be given training on renewable heating systems.

The impact on jobs will vary over time and between regions. Jobs in any given sector may be created or reduced over time. For example the introduction of smart meters across all homes by 2020 will require the mobilisation of a huge workforce. Existing meter technicians will need to be re-trained to install the new meters and should also be provided with training on how to provide information on the meter and wider energy efficiency advice to the householder. However once installed, smart meters will make the existing meter-reading workforce redundant and will only need occasional maintenance.

Whereas some of the jobs created by a shift to a low-carbon energy system will be in specific areas, other jobs will be widely dispersed. For example the development of CCS projects will create jobs in specific locations. The Humber, Teesside, Thames Gateway, the Firth of Forth and Merseyside are all possible location for CCS. However, roles providing energy-efficiency advice will be created across the UK. It will therefore be important that local and regional governments prepare for both declines in certain areas of the workforce and take proactive steps to train workers where new opportunities exist. The same will be true within organisations, where new roles may appear or existing staff may need to broaden their skills.

Our ambitions are high and realising them will require a cadre of green collar workers to effect the transition and to be central parts of the future low-carbon economy. However, green jobs will not all be in new areas of industry or technology. Whilst the shift will create new stereotypically ‘green’ jobs such as wind turbine engineers clinging on to wind turbines, these green roles will be outnumbered by the many existing workers who will need to learn new skills and whose jobs will become greener over time. These will include existing plumbers, builders and electricians. It will also include those working within the public sector who will play a central role in supporting the British public and helping to make our institutions and businesses greener.

By planning and taking a proactive approach to identifying the new skills and roles required, we can ensure that the transition to a sustainable energy system is just and relatively pain-free. We should welcome the transition to a sustainable energy system as if it is done correctly we should all benefit.
The transfer of power: decentralising and greening Britain’s energy production

Gavin Hayes
General secretary, Compass
Neal Lawson
Chair, Compass

The key test of any centre-left public policy framework in the 21st century has to be whether it instils into society and the economy our core values of democracy, equality and sustainability. Nowhere else can this be better demonstrated than in the challenge of formulating a progressive energy policy for the future.

We are over-reliant on carbon-emitting fossil fuels for energy production, which has led to a sustainability crisis. This in turn has led to a crisis of equality; with the oil-price spike leading to rising energy prices, far more people are faced with the prospect of fuel poverty. Meanwhile our system of highly centralised energy production has led to a democratic crisis, with energy ownership concentrated in the clutches of a handful of big corporations, not owned by the people. This is why addressing the issue of equality and ownership of energy is of crucial importance for our future well-being, security and prosperity.

Energy policy: balancing the public and private realms

Energy policy goes right to the heart of the debate about finding the right balance between the public and private realms and about how we should properly regulate markets in the interests of people. Like banking, water and postal services, energy is a fundamental requirement humans need in order to live our everyday lives. Just like getting money out of a cash machine, turning on the lights, the television or our central heating is something many of us take for granted, yet is a vital lifeline. Energy is a public good and a fundamental utility we all rely on and should therefore be treated and regulated as such.

In this context it is worth remembering how we got to where we are. Since the 1990s, our energy needs have been met by a liberalised energy ‘market’. The privatisation of Britain’s energy utilities, much like the demutualisation of Britain’s building societies, was absolutely central to Mrs Thatcher’s efforts in championing a free-market economy. To her “the economy was the means, the goal was to change the soul”. Through privatisation and competition she wanted to change us from citizens to consumers. Indeed, just like the boom in financial services, the UK’s liberalised energy industry has for a while now been regarded as one of her greatest ‘achievements’. However, just as with failed banks such as Northern Rock, there is increasing and well-founded concern about a liberalised energy market’s ability to deliver.

Similarities in the energy and financial sectors

Indeed there are increasing fears that problems emerging in the energy sector are worryingly similar to those that virtually brought down the entire financial sector. The energy industry, like the financial sector, is in effect run by an oligopoly of a handful of large corporations. Just like large banks, the energy companies are therefore too big to fail. Analogous to the inadequacies that were exposed at the Financial Services Authority (FSA) in relation to the financial sector, there is evidence that the energy regulator has also been both weak and slow in responding to growing shortcomings, failing to adapt or change quickly enough to meet the new opportunities, challenges and threats now posed. There is a strong link between the regulators: Calum McCarthy, who oversaw Ofgem, transferred to the FSA. Both have failed because they tried to perfect free markets – if that were even feasible, let alone desirable in such a sector – rather than regulate them.

This is why for a while now, Compass has taken a keen interest and actively engaged in the debate concerning the UK’s future energy policy. Not least because it is a key policy area where we have long warned that there is clear evidence of market failure to the social, environmental and economic detriment of the country.

Indeed, it was why in the summer of 2008 we led calls for a windfall tax on energy utilities. We knew then that the current way our energy was provided was showing signs of failure and urgently needed to change. We called for this one-off tax to be levied in the name of social and environmental justice at a time when the UK’s energy oligopoly was clearly making vast profits from the inflated price of oil, whilst simultaneously failing to use this extra money to adequately invest in Britain’s future. At that time we called for the levy, which it was estimated could have raised £6 billion, to be used to help people with their energy bills. We also called for the revenue to be invested in energy efficiency to protect people from future price rises – this would have gone a long way in helping the government to meet its manifesto commitment of ending fuel poverty by 2010. This campaign highlighted many of the problems with Britain’s future energy supply that have now come to
light. For too long the oligopoly that controls our energy supply has sweated the industry to maximise profit, landing customers with huge bills, whilst at the same time failing to invest sufficiently in order to meet future energy needs and properly deal with the sustainability challenge.

The increasing problems associated with the current energy-ownership model have now even led to calls for an urgent debate on whether or not to renationalise key parts of the energy sector. It is worth noting that these calls have not come from Compass, left-wing MPs, or even government, they have in fact come from the energy regulator Ofgem itself, outlined in its latest consultation document on future energy challenges, Project Discovery. Indeed its chief executive has now admitted that maintaining the current ‘free-market’ approach is no longer an option. Whilst this may well be too little too late, he is right. We need a new approach.

A new model to meet the challenges

Given the systematic failures of the current market-led model, what is the right balance between the private and public sectors in meeting the energy challenges of the future? What would a progressive energy-ownership model with the core values of democracy, equality and sustainability at its heart in practice look like? What would be the key tenet of a new ownership model?

To start with, we urgently need to reconnect people to power. The current model simply encourages us to behave like passive consumers – this urgently needs to change. In order to help achieve this, we need a national debate that engages the public in a serious and honest discussion; not just on Britain’s future energy requirements, but on the need for new forms of public ownership of essential utilities like energy. This is not to suggest we should return to a 1970s-style model of energy ownership; we can and should be far more inventive.

Individual ownership

In the future we should encourage more individuals to own energy assets. Whilst there will no doubt continue to be a large role for the current energy providers in some form, many more energy companies should be owned, not by huge corporations but by local communities that share profits for the benefit of the community. Just as Mrs Thatcher encouraged people to own shares in the privatised utilities – we as progressives should ensure that in the future, energy production and power is directly owned by individuals and communities for the benefit of the many, not just a select few energy giants and their shareholders.

In order to reconnect people to the power they use (and in the future produce) and to promote greater equality, we need the government to champion a mixed and decentralised ownership model. Such a model will necessitate major change to the way energy is produced, consumed and regulated.

Reviewing centralisation

With this in mind, there is a strong argument that the government should immediately review plans for new centralised gas, coal and in particular nuclear power stations. The decision on nuclear power is particularly symptomatic of how the government has got major components of its energy policy wrong up until now and how the energy industry is trying to keep a tight stranglehold on the future of Britain’s energy supply and ownership.

Nuclear power ensures that energy ownership and production remains highly centralised. Retaining control in the firm grip of the energy oligopoly is arguably one of the chief reasons why so many large energy corporations favour nuclear power as it guarantees that energy production remains centralised for a further 30-year period. This is a corporatist and industrial form of ownership that should be left in the past and not included as part of our energy future.

Furthermore, centralised energy production is highly inefficient. Large stations situated miles from urban areas, mean large amounts of energy are lost through transmission, whilst even more is lost in wasted heat before it even leaves the power station as electricity into the national grid. Then once it arrives in our homes and offices a third is lost through poor insulation. In a new era of energy scarcity we cannot afford to waste energy on this scale.

Of course, centralised energy production does nothing to make energy production more secure, or end our over-dependence on foreign exports to fuel these power stations. Oil, gas and uranium all have to be imported, and are all subject to high levels of market volatility as they are finite resources with limited supply.

To make matters worse, to fund a new generation of centralised power stations, energy companies are
largely reliant on taxpayer investment. In the case of nuclear power plants we are being called upon to subsidise construction and pay for the high up-front initial cost of investment in order to make the ventures profitable for the energy companies. So in much the same way as we’ve done with big banks, we the British taxpayers are in effect being called upon to bail out and guarantee the future profits of big energy companies. If the building of new nuclear plants goes ahead we will all be expected to pay an extra levy on our bills to pay for it, this could be as much as 10% extra. This demonstrates how wrong the balance between private and public contribution is and the urgent need for greater equilibrium between the two. The only way we will achieve greater equality is to change the system, make it more decentralised and instead of a small number of large investments, we now need the government to make a large number of small investments in both individuals and communities.

**Investing in renewables**

We should be investing vast sums in decentralised and renewable energy. Generously subsidised micro-generation in every single home across the country, coupled with a much more ambitious mass programme to insulate our homes and offices must become absolutely central to the government’s energy strategy. It is fair to say the government has made some progress in this respect, but many people are unaware of the schemes offered and even with the grants now available many households would find the initial up-front investment unaffordable. We must make energy production and conservation affordable to let everyone play their full part. We therefore need far higher levels of subsidy for individuals to ensure that everyone can have a stake in energy for the future. This would revolutionise energy policy on every level.

**Energy in the hands of the community**

Encouraging people to produce energy in their own homes has the potential to take energy ownership, and subsequently power, away from the energy oligopoly and into the hands of people and every single community. It would mean that people and communities would not simply be energy consumers, ever reliant on big energy companies – whether they be in the public or private realm – to provide energy to our homes, but would also make people energy producers. In doing so it would also ensure people had an asset by giving them the ability to sell back their surplus energy to the national grid. This would also have the benefit of transforming behaviour; we would know exactly what energy we were producing as well as consuming. It would provide an incentive for people to switch off their lights, not leave appliances on stand-by and ensure homes are insulated to the highest of standards. This would help address energy demand and efficiency, not only slowing down the growth in demand for energy but crucially reversing it. This type of investment would encourage the mass production of solar panels and wind turbines which could be fitted to millions of homes, therefore by economies of scale bring down the costs of production and installation. It would be a jobs bonanza just when the economy needed it most.

**Making the dream a reality**

Some people, not least some in the energy lobby, will call this sort of policy a pipe dream. However as research by Oxford University’s Environmental Change Institute rightly acknowledges, in 1950, central heating in homes was more or less unheard of, but in 2010 it is in over 90% of homes across the country. This same research also shows that with the right investment houses could be self-sufficient in energy production by as early as 2050. Where there is political will there is a way.

None of this will happen unless the government makes a conscious and public decision to embark on this route and act as a catalyst for this potentially revolutionising change. Government must play a major role in encouraging people to take up new opportunities for energy ownership. In promoting the decentralised energy ownership model of the future, the government should adopt the sort of campaign we saw in the 1980s that encouraged people to buy shares in the privatised utilities through adverts like “Tell Sid”. It would be a national campaign about giving real power to the people. Unless government takes a conscious decision to actively promote such policies, we will not achieve the popular uptake of micro-generation that is now needed.

In addition to a mass programme of micro-generation, because we know that our future energy needs, especially those of business, cannot be met by this type of energy production alone, government should also promote new forms of community ownership through local co-operatives and the mutualisation of energy production. Isolated examples of this can already be found across the country, but again the government needs to play a much larger role in promoting such
forms of ownership if these new enterprises are to stand any chance of becoming a significant part of the mix of organisations that provide our everyday energy needs. Local authorities also need to be given a much greater role in promoting such energy production in their communities and in acting as an agent to remove barriers and ensuring such projects happen.

Paying for the new ownership model

The question of who pays for the new ownership model of the future is of course key, not least in terms of ensuring greater equality. In a period when the energy oligopoly has sweated our energy utilities in the pursuit of maximising profits, failing to properly invest, it should not then be taxpayers who have to wholly foot a £200 billion bill for the future investment now needed. This would be a gross unfairness. Instead we should be looking to countries such as Norway who have imposed a permanent levy on the energy and oil companies in order to pay for future energy investment.

Even with such mechanisms however, there will no doubt have to be some contribution by individuals to meet the huge levels of investment now needed. If individuals are expected to pay for some of the transformation required in energy production and consumption, then it is of even greater importance that we reconnect people and energy, providing opportunities to own and have a stake in future energy production.

Conclusion

In conclusion, we need a fundamentally new ownership model for the future that guarantees greater democracy, equality and sustainability. To achieve this we need a national debate on energy ownership, including new and innovative forms of public ownership. We need to challenge and break the stranglehold that the UK’s energy oligopoly has on energy production, by moving away from a highly centralised ownership model. We need to reconnect people with power and we need to decentralise energy production to people and communities. To do this we need the government to embark on a mass programme of micro-generation and energy efficiency and give individuals and households the opportunity to become energy producers as well as simply passive energy consumers. We need government to promote new forms of community energy ownership – including encouraging co-operatives and mutuals.

An ownership model along these lines has the potential to be a bigger social and economic revolution – and one that is far more environmentally important – than anything Mrs Thatcher experimented with in the 1980s, including her failed experiment with privatised energy utilities. This is the sort of energy model that would help ensure – at least in the UK – that the poor weren’t getting poorer, whilst we were all doing our bit to stop the planet getting hotter.
The future of regulation

**Lord Whitty**
Chair, Consumer Focus
Writing in a personal capacity

**Introduction**

I first declare my credentials. I have had four decades of dealings with the energy industries in various capacities and of interest in energy policy – as a civil servant, a trade unionist, a politician, a government minister and currently as an environmental regulator, as a representative of decentralised energy and as an advocate of the consumer interest as Chair of Consumer Focus. I am however writing this in my own capacity.

Energy policy throughout this period has had multiple objectives – low prices for British industry; low prices for households; security and self sufficiency in energy supplies; driving greater energy efficiency; minimising environmental damage; and avoiding social distress. Different balances have been struck at different points over those decades and different means have been used to achieve those objectives.

But we have not got it right yet.

**The instruments of energy policy**

There are many instruments available to government to influence the energy markets and thereby help deliver their energy policy objectives – licensing and planning, subsidy or sanction on investment, fiscal policy to change business and consumer behaviour, expenditure programmes on for example on energy efficiency in domestic housing; and avoiding social distress. Different balances have been struck at different points over those decades and different means have been used to achieve those objectives.

**The central problem**

We have under this regulatory regime arrived at a very odd outcome: an overall structure of tariffs that both confuses the consumer and fails to encourage adequate investment; one where over 90% of our energy is still carbon based; and one which is both socially regressive – in that the poor pay more; and environmentally counterproductive – in that the more energy you use the lower the unit price.

That is not primarily the fault of Ofgem but a failure to achieve a joined up government strategy. This contribution analyses how we got here and what are the options for getting out.

**The modern era of the ‘independent regulator’**

With privatisation in the 80s of gas and then electricity came separate regulators whose job was in effect to create an artificial competitive market – initially using price controls to protect the business and domestic consumer, with the objective of eventually creating a real competitive market at which point the ideology of the time would say the role of the regulator would be unnecessary and wither away. This has not happened.

The two original regulators were merged into Ofgem and the predominant consumer protection mode moved from price control to the achievement of low energy prices via competition.

Superficially this for a time appeared successful. From 1980 to 2000 domestic fuel prices fell by 20% in real terms, and were for a long time low by European standards. But that largely reflected North Sea supplies and falling world prices – plus low levels of research and investment expenditure in the privatised industries, though it would be churlish to assert that regulation played no part. Since then prices have been volatile, but the trend of real domestic prices has been upwards since 2003.

**Prices and competition**

The reality is that we do not have a truly competitive energy market in the UK; we have in effect a six-company oligopoly. Most of these are foreign owned (often changing hands at high profit none of which benefits the consumer) and several are vertically integrated from the oil and gas fields to domestic supply. New entrants and brokers have had minimal impact even in niche areas.

There probably was never a cartel in the sense of overt agreement in a smoke filled room but there did not need to be. Price movements up and down tend to be synchronised, if not identical. Different treatment between domestic customers on the basis of how they paid their bills tended to be similar – and to disadvantage the poor (for example those who pay by pre payment meters or standard credit as against direct debit payers).
What’s more, the energy sector has been clearly laggardly in adopting modes of soft competition. Its customer service and consumer satisfaction ratings are the lowest of any major sector – even lower than for builders, estate agents and lawyers – as shown in the Consumer Conditions survey (conducted initially by BIS and now by Consumer Focus).

The assertion that there is not a true competitive market in energy in the UK goes against assertions by ministers and by Ofgem.

But they point not to competition as it would be understood by the consumer but to analogues for competition. In international terms they produce an international index of competitiveness (conducted by OXERA for the then Department for Trade and Industry up to 2006), which purports to show that the UK is the most competitive market in the EU and G7. However, this is a measure of liberalisation and reflects the structure of many European markets with the persistence of state or ex state owned dominant incumbents. Liberalisation may be a necessary but is not a sufficient condition of effective competition.

In domestic terms they point to the increase in switching between suppliers by domestic (and business) consumers. There has indeed been a very dramatic increase in switching and one that both Ofgem and Consumer Focus (and previously energywatch) have supported. But closer analysis indicates that not only are there costs of switching in many cases with termination charges and so on, but also that many switchers – particularly low income switchers – do not in practice achieve a better deal. Switching is usually the result of dissatisfaction – often at poor customer service rather than simply price – and that level of dissatisfaction is not indicative of a truly competitive sector.

For the domestic consumer the choice that competition promises is often in practice total confusion. An individual household is theoretically faced with a choice of almost 2000 different tariffs and payment schemes. Clarity, transparency and simplicity are not evident. Choice on this scale does not benefit the consumer. This is compounded by the widespread use of estimated (ie wrong) bills so that consumers cannot see how their use of electricity relates to the structure of the tariffs on offer. So the system of independent regulation has not achieved a real competitive market. That is not to say there have been no consumer benefits, nor is it to say that energy is unique. Water and telecomm regulation by Ofwat or Ofcom has not exactly created full competition in those sectors. But the prime objective for Ofgem – one which successive government departments and Ofgem have – until very recently sought to defend – has been the achievement of competition for the benefit of the consumer. At best that has only very partially succeeded.

The wider context: social and environmental issues

The key issue is: should competition and average prices be the prime duty of Ofgem, taking precedence over all its other duties?

Consumers do recognise that real energy prices are going to have to rise over the coming period given the market problems, investment claims and the environmental pressures. For price rises to be acceptable we have to explain not only how that can be offset by energy efficiencies but also that any rise will be distributed in a way that does not hit the most vulnerable consumers the hardest – the fuel poor. At present we do not have such a convincing narrative.

There will need to be a completely new structure of tariffs introduced – on not based on internal cost relativity but on total externalities – environmental and social costs. This is difficult to get across in that it appears to involve cross subsidy – usually an anathema to policy makers and regulators. Even our arguments for a very simple form of cross subsidy – the social tariff – have been received until recently with hostility by the regulator and the department.

What is for regulators and what for ministers?

As originally conceived the independent regulators post-privatisation were to be economic regulators full stop. Although they had to have regard to other issues this was their prime duty. And despite multiple changes in the primary legislation it still is. The original concept was that detailed price and economic regulation was the responsibility of the regulator. And that social, environmental and ethical issues – and indeed wider economic issues – were for ministers and the government of the day; they set the framework for the economic regulator but the regulator needed to focus on the prime duty. Hence in the energy field two issues which have been of rapidly rising importance fuel poverty and climate change were not the responsibility of Ofgem.
In theory that distinction should have been clear. The primary legislation gives ministers reserve powers to use the power of direction to regulators if these wider issues needed to lead to changes in the regulator’s – in this case Ofgem’s – approach.

In practice two things happened: ministers and civil servants have regarded powers of direction as a sort of nuclear option and approached the use of them with great timidity. These powers have rarely been used in any sector. There are respectable arguments for being very reluctant to use these powers as they undermine the concept of independent regulators. But the less respectable argument reflects the lack of joined-up government in Whitehall; these wider considerations were the responsibility of other government departments than the sponsoring department: fuel poverty, energy efficiency and the environment were with Defra and the wider social impacts with the Department for Work and Pensions for example. DTI/Berr/BIS responsibility – heavily backed by the Treasury – was precisely this prime objective and they did not have a reason for making other objectives equally important. They did not want to intervene and give Directions in these areas.

This was coupled with a commitment to what was called Better Regulation but often meant deregulation.

However the real world has intervened. Broader politics have put climate change and to a lesser extent fuel poverty centre stage. But instead of issuing directions, ministers have opted for changes in the primary legislation.

The most important example was probably to give to Ofgem sustainability objectives and specifically responsibilities for the Renewable Obligation Certificate market and other regulatory duties designed to increase the share of energy sourcing from renewables (currently only 5%) in pursuit of climate change objectives, a more subtle change was the upgrading of the reference to ‘future consumers’ in the most recent Energy Act 2009.

The other important change was the creation in 2008 of a single department – DECC – the Department for Energy and Climate Change – covering most aspects of energy policy in one department under one influential secretary of state.

At the same time there have been significant changes within Ofgem who have begun to take a much wider view of its own responsibilities. The Ofgem probe last year revealed substantial dysfunctional aspects of the market – many of which had been pointed out by Consumer Focus and its predecessor energywatch for some time – but they are now being pursued. Meanwhile Ofgem has established a sustainability strategy and a social action plan and have set up a consumer panel.

I welcome both these changes. But they do not answer the question of what should be the responsibility of ministers and what should be that of the independent regulator.

Better regulation and deregulation

They are also overtaken by a wider argument about the future of regulation more generally; for some time we have had the ‘better regulation strategy’ and the Hampton principles of ‘better regulation’ now just before a general election there is heightened attention to rationalising the regulatory framework, with both government and opposition looking for more light touch and cost effective regulation.

All political parties purport to want simpler regulation. But in energy they also want environmental objectives – principally climate change objectives as set under the Climate Change Act to get us on to a path of 80% carbon cuts by mid century,

The Conservatives have indicated that they wish to reverse what they call ‘scope creep’ i.e. regulators expanding their concerns beyond their core objectives, by regulators so that broader responsibilities should revert to Ministers and that regulators should have a more restrictive role than currently. There will be some on the left who will reach the same conclusions on the grounds of democratic accountability.

That is a move in the wrong direction. Ministers should certainly set clear objectives to regulators but those objectives have to cover wider issues than current prices for current consumers; and they should be prepared to use their reserve powers more strategically albeit sparingly. But that mandate needs to be wide.

It also needs to be stable and consistent to gain the trust of consumers and investors alike. The legislative framework should not be altered by new primary legislation every two years. The Tories actually have a better idea in their statement ‘Regulation in a post bureaucratic age’ which contains both very bad deregulatory proposals and some good ideas on regulatory mandates subject to seven yearly review.
Incorporating into such mandates objectives for climate change, energy efficiency and reduction of fuel poverty would give the regulator a much more rounded role. There are those who would argue (for example Dieter Helm) that it should be an energy agency rather than a classic regulator, but what ever it is called we need to recognise that you cannot regulate energy without incorporating environmental and social objectives.

The key example of energy efficiency

I write in the immediate aftermath of the failure at Copenhagen. For the moment national and European programmes for decarbonising our economies are going to be the way forward.

Decarbonising the system would be greatly aided by reducing the total demand for energy as well as shifting to low carbon sourcing. I would argue for a massive programme on energy efficiency. Preferably that should be financed by us as taxpayers rather than – as is the case with the switch to renewables – being largely financed on a virtual poll tax basis by us as consumers. But in the present public expenditure crisis taxpayer finance is unlikely – but if it is to be financed via bills it should be the regulators job to ensure it is on an equitable basis.

Inefficiencies occur at all points in the energy chain:

— at the generation stage where power stations are at best 50% efficient — we need combined heat and power to capture the heat as well as carbon capture and storage;

— in distribution in the grid itself where we lose up to 15% of energy and where we need to encourage more decentralised energy in our public buildings and district heating for residential estates;

— in our homes and offices where we need large scale improvements in insulation and the efficiency of heating systems for all buildings with priority for the fuel poor.

— and in the appliances we use in our homes and offices — through a combination of energy efficiency labelling, regulations for devices to default to switch-off rather than standby — and if necessary banning of particularly energy intensive devices – patio heaters would be my favourite for a ban.

We need to act on all these fronts and they all have regulatory dimensions — but they are not the classic territory of economic regulators. Maybe this is a good argument for bringing them all together with Ofgem powers in an energy agency.
Worker-owners of the UK energy companies

Colin Meech
National officer, UNISON

The UK public sector has been a laboratory for neo-liberal policies, particularly those related to market liberalisation and privatisation. A key sector of the UK economy, energy, has gone through a series of ownership changes, from the state to joint-stock companies with shares traded on the stock market and subsequent takeovers and mergers.

Who owns the energy sector?

A key question for any trade unionist bargaining with energy-sector employers or engaging in key debates around the future of the energy industry is “who are the ultimate owners of the company?” This is a question UNISON’s capital stewardship programme has set out to establish.

In the past and before nationalisation, wealthy families held controlling stakes, the capitalists we all know and remember. But now, thanks to the fight for pensions and savings by previous generations, shareholdings are now majority-owned by millions of workers via their pension funds, insurance products and with their own small savings.

Around 60% of these funds will be invested in shares in the UK and overseas stock-market-traded companies. Recently many of these companies have been taken off the stock market by ‘private equity’ funds; these are organisations that pension funds will also invest in.

A typical private equity takeover is funded by borrowings to buy out the shares of the public investors; the company is then run by a board no longer accountable to its shareowners, but the profits that the company make go back to the pension funds that put up the money in the first place.

UNISON’s capital stewardship research

UNISON’s capital stewardship project embarked on a long-term research project called Who Owns UK Public Services Plc?. The first analysis concentrated on the shareholdings of the local government pension funds, mainly because these are publicly available through a freedom of information request.

The table opposite shows some of the early reports about the share ownership of the public energy companies. This is to demonstrate to the reader our assertion that, although highly disaggregated, the pension funds of UK workers and of workers around the globe are the majority owners of the companies supplying energy to the UK market.
Local government pension ownership of energy companies

The following table sets out the local government pension ownership (2008) of the stock-market-quoted companies providing energy to the UK market.

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<th>Share Value (£)</th>
<th>% owner</th>
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Of course similar holdings are held by the pension funds of large numbers of other workers around the globe. New research produced by Towers Watson (http://www.towerswatson.com/research/972) shows the extent of the bounce-back in value of assets held by the world’s largest pension funds. Towers Watson estimate the value of our assets to have reached $23.2 trillion in 2009, up 15% on 2008, the year in which the world’s economy was bought to the brink of collapse by the world’s largest banks. Of course asset values do not bring income into pension funds. It is the returns from the assets that help pay our pensions and these have been in decline. But higher asset values will help the coming local government pension fund valuations and they will hopefully reduce the funding gap.

Of the ‘P13’ countries (those with the largest pension markets) covered in the survey – Australia, Brazil, Canada, France, Germany, Hong Kong, Ireland, Japan, Netherlands, South Africa, Switzerland, UK and the US – America, Japan and the UK remain the largest in the world in terms of workers’ savings, accounting for 57%, 14% and 8% respectively of total global pension assets.

Chief executive officers of these companies insist they are obliged to operate ‘aggressively’ to make profits for their shareholders – as well as fill their own pockets of course. The shares pay annual dividends – a portion of the annual profit. The bulk of global dividends end up paying pensions or growing the fund, ready for retirement.

If you or someone in your family has savings, or pays into a pension scheme, that makes you part owners of hundreds of big companies – you are in effect the ‘new capitalists’.

Take a typical UK company, Centrica for example. About 18% of its stock is owned by UK-based occupational pension schemes. Another 23% is owned by UK-based commercial savings funds, and a further 30% or so is owned by similar funds from abroad. The situation is similar in the world’s other major stock markets.

It is workers, as owners of companies, who employ the managers, not the other way round. Where workers are organised as owners, they can even sack managers and insist on the correction of bad corporate behaviour.

The large US pension funds for teachers and public sector workers in the state of California (Calsters and Calpers) with good union organisation, already use their ownership of companies to curb sweatshop labour and corruption. UNISON’s staff pension fund has just co-filed a resolution to the Shell AGM asking the company to produce a full report on the environment and financial costs of the ‘Oil Sands’ extraction in Canada.

Now, a project sponsored by the United Nations Programme for Responsible Investment (UNPRI), which includes trades unionists and shareholder activists, is creating a co-ordinating centre for combined action by pension and investment funds to make a difference to company behaviour. UNISON’s staff fund became a signatory in 2009.

The role of trade unions

 Trades unions find themselves, if they wish to take up the challenge, in a uniquely central and influential position. They represent workers as employees, they often represent workers as investors, and they have broad social and international ambitions to end poverty and improve living standards.

No other body in the economy has such an extensive remit. But this position imposes a great responsibility for trades unions as capital stewards. Will it be possible to co-ordinate investment so wisely that society can ensure three outcomes simultaneously – improved pay and conditions, improved profits (yes, for the retirement income of our fellow workers) and sustainable development for workers around the world?

This can only be done if the purchasing power of the wage, dividend and tax elements all increase in real terms. The total cake of real sustainable wealth must be grown. Just dividing it differently merely favours one group over another.
Some questions for consideration

There are many questions that need to be considered in this debate:

— Should the rules of trade, tax and debt be revised? And if so, how?

— How much competition is most efficient?

— Should our shared companies share their patent rights?

— How much should research and development budgets be to get the best sustainable new technologies?

— How do we green the planet and create sustainable and wealthy communities?

— Are some sectors too strong and others too weak?

— Can we ensure that in any changes in sector size, workers in contracting sectors are guaranteed immediate new employment and their share of the new real wealth the change is supposed to create?

— Do we want our companies to lobby governments any more, and if so, what for?

— If companies’ current management practices and pay structures are in need of reform, exactly which reforms?

— What will the new company management and worker relations look like, and can we be sure the enterprise won’t go bust in the process?

Management of our members’ savings

So, capital stewardship, the management of our member’s savings, needs serious-minded thinking. Collaboration and sharing of knowledge will be essential. No single capital steward can expect to become a one-person specialist in the entire workings of investment rules and the global economy.

Capital stewardship also means serious-minded democracy. Trustees on pension funds will need to develop a dialogue with all contributors if they believe there are alternatives.

A trustee who uses their position to make investment decisions without the endorsement of members is in breach of fiduciary duty, and guilty of depriving workers of their basic rights in their own savings decisions.

In many countries, new democratic rights for worker-investors are being won. In the UK, the unions – led by UNISON’s general secretary Dave Prentis – secured a commitment that half the seats on pension trustee boards must be filled by members. Similar legislation is being introduced across Europe.

The current number of union-sponsored trustees and activists associated with the TUC’s trustee network is less than 1,000. UNISON has created a web community with over 400 registered ‘capital stewards’. You can register if you are a trustee or branch pension contact at: capitalstewards.org

Future guardians of capital

Capital stewardship is not the only role for trades unionists, of course. Workers will always need to organise as employees. But capital stewardship is both neglected and ever more vital. Following waves of privatisation around the world, private capital is responsible for about 80% of capital expenditure. And today’s capital expenditure dictates tomorrow’s conditions of life. It’s the seed corn.

All generations need to be encouraged to be active guardians of capital, whether in state or private hands. From young people just starting out, to older ones heading into retirement, we need to use these rights to ensure that the wise investments in energy and technology necessary to ensure that life is sustainable and more fun for all are made.
Let us be in no doubt – the overwhelming scientific consensus is that climate change is real and we are seeing signs of it happening now. The trend in global temperatures is rising with the 2000s having been warmer than the 1990s, which in turn were warmer than the 1980s. Last year (2009) is likely to rank in the top 10 warmest years since the global temperature records began in 1850, along with most of the other years since 2000. Closer to home we are seeing other signs of climate change. River water temperatures are rising and species such as the damselfly are moving northwards in England and Wales with the temperature. It seems as if winters have become wetter with rain increasingly falling as downpours over the past 45 years. This kind of intense rainfall is a key factor in river and surface water flooding.

In July last year the government published the latest UK Climate Change Projections, which predict warmer, wetter winters and hotter, drier summers, along with more extreme events, such as flooding, droughts and sea level rise. With our responsibilities for water resources and flood risk management the Environment Agency is at the frontline of dealing with many of these impacts. Our modelling suggests that if emissions continue on the existing trajectory, an additional 330,000 properties will be at significant risk from flooding by 2035 and that by 2050 we could witness a 50-80% reduction in river flows in some months.

Decarbonising energy generation

Developing an effective approach to decarbonising our energy generation and usage will be central to meeting the challenge of tackling our rising greenhouse gas emissions and avoiding the most dangerous aspects of climate change. Global emissions are currently increasing by 3% each year. We need to reverse this trend in order that global emissions peak within the next decade and then at least halve by 2050. And that means defining a positive role for action on an international and domestic level. This Energy Prospectus, therefore, could not be more timely coming after Copenhagen negotiations and in setting out the challenges of how we bring together government, business and public sector responsibilities.

The outcome of Copenhagen was disappointing – it did not establish a clear timetable for a legal treaty and we do not have the commitments to cuts in emissions that we were looking for. However, the Copenhagen Accord does mark progress. It was agreed by a group of countries that account for over 80% of global emissions. It also endorses the limit of two degrees warming as the threshold for dangerous climate change. Most of the key players have also met the 31 January deadline to register their expected emissions reductions.

However the world needs to go much further – we need a legally binding framework that delivers more certainty on emissions reductions and a greater scale of ambition.

Meeting carbon reduction commitments

In order to show leadership I believe that the time is right for Europe to deliver its commitment to move from 20% to 30% reductions by 2020 compared to 1990. In the meantime, the UK’s commitments in the Climate Change Act to reduce emissions by at least 80% by 2050 remains a world first and something we should be proud of. The onus is on all of us now to work together to deliver on this commitment. We need to demonstrate to the world that we can reduce our emissions and that by investing in new low carbon technologies we can come out of this recession with a new low carbon economy.

The Environment Agency has an important role in helping to deliver the UK’s commitments and acting as a bridge between national policy and targets and the varied businesses, communities and other bodies we interact with. The Environment Agency launched its new Corporate Strategy in November last year. Climate Change is the first theme of the strategy and in it we set out what we plan to do to help the government achieve its target on climate change. If we are to achieve an 80% reduction in greenhouse gas emissions by 2050 this will require every part of society to play its full part in this low carbon revolution.

One of the most cost-effective ways to achieve greenhouse gas emissions are cap and trade schemes. These schemes allow sectors of the economy to find the most cost-effective emissions and trade between themselves within a tightening cap. The EU Emissions Trading Scheme (EU ETS) is the world largest trading scheme and covers around 11,000 installations accounting for 45% of the EU’s carbon dioxide (CO2) emissions. It ensures that large industrial players are factoring a carbon price into their investment decisions. Whilst the ETS has been criticised in the past for low carbon prices and complicated allocation of free
allowances, we believe that many of the changes that have been agreed for its future such as an EU wide cap and an increasing proportion of allowances being auctioned rather than given away will result in more emissions reductions and a higher, more stable carbon price.

A new cap and trade scheme

On 1 April 2010 a new cap and trade scheme – the Carbon Reduction Commitment Energy Efficiency Scheme (CRC) – will start. It is aimed at large public and private sector organisations such as government departments, local authorities, supermarket and hotel chains. This will bring around 5,000 additional UK organisations into a cap and trade scheme for CO2. You can find out if your organisation will qualify at our website: environment-agency.gov.uk/crc. As well as administering the scheme the Environment Agency will be a participant so we will quite rightly have our own actions on climate change put under the spotlight. The CRC has the potential to reduce CO2 emissions by 11.6 million tonnes by 2020 – the equivalent to taking four million cars off the road. This scheme presents a massive opportunity to engage thousands of new organisations in taking action on climate change.

Personal behaviour, our transport choices and energy use in the home, accounts for 42% of emissions. We will need to tackle these emissions with as much vigour as other sectors of the economy. Over the next 10 years we will need to ensure that every home is fully insulated – the “Great British Refurb” – and that we achieve a wholesale shift to electric vehicles.

Hot water use is a major cause of domestic carbon emissions and could even overtake emissions from heating in new homes unless action is taken to reduce demand and energy losses. 23% of an average home’s carbon footprint results from the energy used to heat water. Water-saving technology and sustainability standards for new homes have helped to reduce wastage but the growing popularity and frequency of use of power showers means that Britons still use the same amount of water today as they did 10 years ago – around 150 litres per person per day.

Renewable energy targets and new technologies

Over the next 10 years, it will be critical that we make substantial progress in the move away from carbon-intensive electricity and heat production to sustainable low carbon energy. Given the scale of the challenge we will need to use all available sources – renewable energy, nuclear and fossil fuels with carbon capture. The Committee on Climate Change has recommended that by 2030 we need to have almost fully decarbonised our electricity production. The UK government has also committed the UK to sourcing 15% of our energy needs from renewable energy by 2020 – a massive shift from the current 2%. Both are truly transformative targets if they are to be met and will only be achieved through an effective partnership between government, business and wider society.

To achieve our renewable energy targets it will also mean a step-change in the development and application of new technologies, with thousands of new wind, biomass and small-scale hydro schemes. It also means that we need to develop much more actively our country’s research into tidal and wave power, which has huge potential for Britain. And it could mean that, by 2020, 30% of our electricity comes from renewable sources as well as 12% of our heat and 10% of our transport fuels.

At the Environment Agency we are very keen that this next generation of renewables is both sustainable in production and usage. We are working to identify possible environmental impacts such as damage to fish from hydropower schemes or air quality impacts from biomass and then identifying how we can overcome these issues to ensure that schemes where possible are both benefitting the local environment and reducing climate change. For example often by installing a fish pass hydro schemes can help fish movement through rivers.

Not all biomass sources are sustainable – we need to ensure that the current financial incentives offered to use purpose grown biomass (rather than biomass from waste sources) do not result in deforestation, thereby making the cure for using fossil fuels worse than the disease. We would like to see mandatory sustainability standards for biomass in order that we are sure that these schemes are delivering real emissions savings compared to using fossil fuels. These standards must take into account life cycle emissions of producing biomass including emissions from cultivation, production and transport as well as the efficiency of the power station or domestic boiler, and the Environment Agency is working to help bring this about.

Although I know that many are sceptical, in my view nuclear power also has the potential to make a significant
contribution to meeting the UK’s future energy challenges and government has been working to streamline the planning and approvals process for new plant. To help with this we have been working alongside the Health and Safety Executive to scrutinise two reactor designs and will be consulting on our findings during 2010. We want to help ensure that new nuclear build will meet world-class safety, security and environmental standards. Regardless of whether we have nuclear new build we must also continue to work on cleaning up the nuclear legacy and on development of a Geological Disposal Facility so as to provide a permanent way to dispose of our nuclear waste. This should be a prerequisite for a new generation of nuclear stations.

The development of carbon capture and storage technology is a good example of how government leadership, international collaboration and private investment all need to work together. It might also add substance to the broader debate on how we demonstrate in a meaningful way what a ‘Green New Deal’ might look like. If we are to achieve the targets recommended by the Committee on Climate Change we will need carbon capture and storage technology ready by the early 2020s. Given this is a technology that has not yet been demonstrated at commercial scale anywhere in the world this will be quite a challenge. The government has taken the vital decision that any new coal plant will have to install a 300MW demonstration project as part of its planning conditions and has committed to funding four demonstration projects here in the UK. The Environment Agency has been asked to work with government and operators to regulate this important new technology.

What the Environment Agency is doing

Of course I can’t advocate to others the importance of climate change unless I am sure that my own organisation is doing the best it can to reduce its own greenhouse gas emissions. Reducing greenhouse gas emissions is a high priority for the Environment Agency and our performance is reported to the board. We are committed to achieving a 33 % reduction in CO2 by 2015 from a 2006/7 baseline. To date we have achieved a 14% reduction through measures such as voltage optimisation, strict enforcement of winter heating controls and summer cooling, site energy audits, switch off campaigns and transport plans as well as installing various renewable technologies on our sites. We’re also making sure that the investment decisions made by the Trustees of our pension fund are shaped by environmental as well as financial ambitions. And, as is the case with many of your organisations, our performance in reducing CO2 will be ranked alongside others once the first year of the CRC Energy Efficiency Scheme is complete.

This year will be viewed as an important staging post in our response to climate change. The challenges in 2010 are manifest: to maintain momentum internationally following Copenhagen; keep our domestic focus on making the transition of a low carbon economy in a period of political change and whilst recovering from a recession; and to reconcile concerns about sustainability with consumer concerns about rising energy prices. This will require strong leadership at all levels. The responsibility is on every individual and every business to take action to exploit the opportunities that this new low carbon era presents. UNISON’s Energy Prospectus is an important reminder that we need to remain vigilant in reassessing how energy policy must adapt to face these stern challenges.
Paying for the green energy revolution during the triple crunch

Ann Pettifor
Member, Green New Deal group

As we move into a new decade, the people of Britain face the ‘triple crunch’ of economic failure, climate change and depleted natural resources, including gas and ‘peak oil’. These are very grave threats to our security and to our futures. Yet economists, politicians and regulators – those ‘guardians of the nation’s finances’ that should exercise leadership at such times, revert only to the 19th century economic orthodoxies that caused the crisis, have long been discredited and are now found wanting. Into this vacuum of leadership stepped a small group of economists, green campaigners and an oil expert. After months of discussion and debate, we published in July 2008 an outline of the ‘joined-up’ policies needed to tackle the triple crunch. We called our programme the Green New Deal.

In the months before the collapse of Lehman Brothers, we predicted that the “unwinding of corporate debts together with subsequent write-downs and losses by banks, means that there is worse to come … the sub-prime debt crisis will soon come to be seen as just the first domino to fall in a line of adjacent dominoes, threatening a systemic crisis”. As we go to press, another of the ‘dominoes’ has fallen: sovereign debt. Dubai, Iceland, Greece, Portugal, Spain and Ireland have all buckled beneath the burden of high and costly debts. The response of central bankers, finance ministers and economists has been to support and recommend further contraction of the economy through austerity measures. Apparently ignorant of the history of the 1930s, these politicians propose to repeat the policy mistakes that led to the immensely destructive Great Depression.

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Affording investment in crunch times

One of the most dominant, but flawed of these orthodoxies is the idea that society cannot afford to finance and invest to address the triple crunch. We cannot, it is argued, ‘afford’ to lower unemployment. We cannot, some argue, afford to increase government spending to mobilise a carbon army of ‘green-collar jobs’ – and invest in green energy. Government cannot afford, the Conservatives argue, to compensate for the £60-billion collapse of private investment, even though the private sector is expected to cut investment further in 2010 by 25%. This shrinking proportion of a smaller economic ‘cake’ or GDP will further contract the economy and increase unemployment.

We cannot afford, it is argued, to fill the ‘output gap’: the gap between what we can produce and what we actually produce. This gap has grown to more than £70 billion since the start of the crisis in August 2007. As output falls, and the gap widens, government revenues fall automatically and spending on unemployment and other benefits rise automatically. This, as Professor Skidelsky has argued, causes the government’s deficit (its annual balance between income and expenditures) and its total debt to rise. The increase in spending on welfare benefits comes on top of the costs of bailing out the banks. When this crisis started government debt stood at a very reasonable 37% of GDP – and amounted to £650 billion. Today, two years into this financial crisis, government debt has risen by 20% – that is by £250 billion. £150 billion of that rise in debt is directly attributable to the bailout of the finance sector, including the financial rescue of banks like RBS, Northern Rock and Lloyds – according to official statistics. The rest can be attributed to the costs the government is incurring in cleaning up the mess – paying unemployment benefit, providing fiscal boosts and so on.

If a Conservative government is elected in 2010, then shadow chancellor George Osborne has committed his party to cutting the deficit, and shrinking Britain’s economic ‘cake’ even further. Tory policies, therefore, mimic almost precisely the deeply discredited policies of the 1930s. Implicit in these policies is the assumption that Britain’s industries, her educated and skilled workforce and her record of innovation – all the resources necessary to address the triple crunch outlined above – are ‘unaffordable’.

This attitude and these policies contrast markedly with that of the authors of the Green New Deal. Like John Maynard Keynes we are convinced that we in Britain can afford what we can create … “believing that the money thus spent would not only be better than any dole, but would make unnecessary any dole”.

Keynes (in a 1930 essay titled ‘The Great Slump’) recognised at the height of the financial crisis, that one of the reasons for the collapse in private sector investment and output was due to the attitude of lenders – “because new capital-goods are produced to a large extent with

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Lenders were demanding higher terms for loans – more than enterprises could afford. As then, now in Britain in February 2010 lenders are withholding loans. In February 2010, the Financial Times reported the story of entrepreneur Omer Kutluoglu. He had applied to a bank that is effectively publicly owned – the Royal Bank of Scotland – for a £2 million loan for his successful recycling business. "The bank offered to provide the entire sum required at an interest rate of 3.75%, but only if Mr. Kutluoglu first deposited an equal amount of his own money in a separate savings account earning 0.5% interest." The entrepreneur declined the nationalised bank's usurious offer, and turned to a Belgian bank for a loan denominated in a foreign currency.

The reluctant attitude of lenders in 1930 was then, and is today, matched by the reluctant attitude of borrowers. This is because deflation, or the fall of prices now prevalent in the global economy, is disastrous for corporate borrowers – especially for those already indebted. Despite the widespread anxiety about inflation, signs of deflation are all around us – in the '3-for-2' and 'sales' offers in retail outlets, in falling profits and falling wages as a share of GDP. The combination of debt and deflation renders borrowers very reluctant to borrow. But perhaps the biggest obstacle to borrowing is high rates of interest. According to the most authoritative source on interest rates, since modern capital markets came into existence, there have never been such high long-term rates as we recently have had all over the world (Homer and Sylla, 1991, p1) iv.


iv Sidney Homer’s A History of Interest Rates, has been the definitive analysis of the subject since its first edition in 1967. He published a second edition 10 years later. Homer died in 1983, and his pupil Richard Sylla was entrusted with the production of a third edition of his work. On the opening page, Sylla warned: The spectacular rise in interest rates during the 1970s and early 1980s pushed many long-term market rates on prime credits up to levels never before approached, much less reached, in modern history. A long view, provided by this history, shows that recent peak yields were far above the highest prime long-term rates reported in the United States since 1800, in England since 1700, or in Holland since 1600.

A green new deal to kickstart economic activity

Into this toxic economic mix we, the authors of the Green New Deal, assert firmly that Britain can afford what we, the people, can create.

That we can use the monetary or credit system to provide the finance needed to kick-start our own economic activity, provided it is soundly regulated. Just as the Bank of England used the banking system to create £1,000 billion in credit (quantitative easing) to bail out the banking sector. Only under the Green New Deal new financing would go to the productive sectors of the economy; including, of course, new green energy capacity.

That, contrary to the misguided thinking of most orthodox economists, credit creates economic activity – and is not the result of economic activity. That credit creates deposits and/or savings in the banking system, and not the other way around.

That, again contrary to the orthodoxy, the creation of credit is only inflationary if it exceeds the level of economic activity of which the economy is capable. In other words, the creation of credit would be inflationary in conditions of full employment, or where it exceeds the value of assets in the economy (as it did during the great asset bubble of the 90s to which regulators turned a blind eye). While economic activity and employment falls below its potential, credit acts to kick-start economic activity, not to inflate prices or wages.

That government expenditure in productive economic activity at home results in income – for the private sector, for millions of the unemployed and for Britain as a whole. This is because government spending (investment) – unlike private expenditure – generates both income for others, and its own income. Government spending can generate income for Treasury coffers directly through the tax revenues of the newly-employed. It does so indirectly as wages are spent in businesses that pay VAT and other taxes. This is known as the multiplier effect.

In short, government investment in productive activity at home pays for itself.

Keynes and economic recovery

At the heart of our proposals for financing the Green New Deal lie the long-buried monetary policies of John Maynard Keynes.
Keynes. Keynes had advocated the use of fiscal policies as a cure for financial crises. However, his overwhelming concern, and most of his published work, is to do with monetary policies aimed at preventing financial crises. It is this work – which stressed regulation of finance including capital control – that has been dismissed and marginalised by the finance sector and its allies in the economics profession.

Keynes was a monetary reformer who rejected the liberal financial order of the pre-Depression years. He sought to provide the world with a soundly managed monetary system. In doing so he developed his theory of the operation of a monetary – credit-based – economy, published in 1936 as the General Theory of Employment, Interest and Money.

Keynes argued that the level of employment and activity in an economy depended critically on the rate of interest. Prerequisite to a prosperous and just society was a low rate of interest. A low rate of interest permits private industry to thrive. For capital investment projects to expand, activity depends on affordable finance, and affordable finance is cheap finance.

In February 2010 Barclays Bank came to a similar conclusion. The bank published its long-running survey of investment returns, the Barclays Capital Equity-Gilts study, and found that for investors, economic growth and the profits of targeted companies were not particularly important. Instead investment returns were more strongly linked to cheaper credit. Once the cost of credit rises, Barclays concluded, investors start to lose, and equities “cannot make much headway”. (http://www.ft.com/cms/s/0/9d5e30c4-173f-11df-94f6-00144feab49a.html John Authers, Financial Times in ‘Short View: why credit spreads matter’ 11 February 2010). Unfortunately such common sense has come too late to rescue the thousands of companies bankrupted by debt or mired in debt that must be repaid at high, real rates of interest. These rates rise in real terms as the credit crunch deflates prices and profits. Ecologically sustainable finance is cheap finance. Because if the cost of finance is halved, then a great deal more investment projects become viable, including renewable energy projects, public transport, and the like. Equally, government expenditure can be freely extended if the interest burden is low.

Under the advice of Keynes, from as early as 1931, the Bank of England rate was cut to, and fixed at, 2%, and debt management policy was used to establish a structure of low interest rates across all types of borrowing. During World War II, when Britain borrowed more than it had ever done before, interest rates never rose above 3%.

The international environment was aimed at enabling domestic monetary autonomy – so that democratically elected governments could respond to the needs and mandates of their people, and not to the threats and blackmail of international capital markets. vitally, capital controls were implemented so that speculators could not undermine exchange or domestic interest-rate policies. Without capital control, central banks cannot act to lower rates of interest – for short and long-term loans, for safe and risky loans.

Keynes’s policies permitted recovery from the Great Depression, underpinned the allied war effort and fostered the golden age of economic activity that prevailed until the 1970s. In just the same way, the policies of the Green New Deal will kick-start economic recovery and tackle the twin threats of climate change and peak oil.

A bold new vision for low-carbon energy

We want government to execute a bold new vision for a low-carbon energy system that will include making every building a power station. This will involving tens of millions of properties, whose energy efficiency will be maximised, as will the use of renewables to generate electricity. This will require a £50-billion-plus per year crash programme to be implemented as widely and rapidly as possible. We are calling for a programme of investment and a call to action as urgent and far-reaching as the US New Deal in the 1930s and the mobilisation for war in 1939.

Second, we call for the creation and training of a ‘carbon army’ of workers to provide the human resources for a vast environmental reconstruction programme. We want to see hundreds of thousands of these new high- and lower-skilled jobs created in the UK. It will be part of a wider shift from an economy narrowly focused on financial services and shopping to one that is an engine of environmental transformation. The UK has so far largely missed out on the boom in ‘green-collar’ jobs, with Germany already employing 250,000 in renewable energy alone.

Third, we want to ensure more realistic fossil-fuel prices that include the cost to the environment, and are high enough to tackle climate change
effectively by creating the economic incentive to drive efficiency and bring alternative fuels to market.

Above all, we want to recreate an economic framework that will mean Britain as a society can finally afford to tackle the triple crunch of economic failure, climate change and energy depletion.

Without such a framework, our future security will remain under threat.
What are your views about reform of the UK’s energy sector?

Join the debate by sending us your views to greenunison@unison.co.uk