Energy Policy Since 1979: From Lawson to Mandelson

*By Dieter Helm**

I Introduction

Faced with the surpluses of cheap energy in the late 1990s, it is increasingly difficult to recall the very different energy context back in 1979, nor the policy mind-set that went with it. Those were the days when oil prices were assumed to be heading ever upwards to the $60 a barrel level, coal prices followed the steady rise in miners' costs, gas was a premium fuel, and uranium was regarded as sufficiently scarce to merit reprocessing.

It was not surprising that the 1970s were the high point of post-war energy policy activism. The Department of Energy had been set up in response to the first oil shock; the Plan for Coal, after Heath's government had been brought down, laid out a predict-and-provide investment in mines and coal power stations; the AGRs were planned to break the dependency on OPEC; and THORP and the fast-breeder programme suggested a long-run non-fossil-fuel future. In the meantime, the state developed North Sea oil through BNOC, and natural gas through British Gas.

Energy policy represented a response to the problems of the 1970s—security of supply, and rising prices—in the context in which the state was naturally regarded as the instrument for delivery of what markets could not. It did keep the lights on (except in early 1974, during the miners' action), and it did produce sufficient capacity. When meeting energy demand was the problem, energy policy proved able to supply.

Much of the energy infrastructure of the 1980s and 1990s was inherited from the 1970s. All the Magnox, and some of the AGRs, stem from this period, as do the coal mines, and almost all the coal-fired power stations. Indeed, when the very different economic circumstances of the 1980s—and, particularly the very sharp recession of 1980–82—emerged, Britain was awash with coal mines and power stations, and North Sea output repeatedly exceeded the expected production and reserves. Gas was to prove extremely plentiful too. Resources in the North Sea turned out to be endogenous to price and costs; far from declining, the numbers kept being revised upwards.

The surplus of capacity was coupled with the very opposite of expectations—the oil price collapsed in the 1980s, and stayed low until the end of the 1990s, except for the blip during the Gulf War. The future was one of excess supply, not demand, and the efficiency of existing plant, rather than investment, a central issue. Competition and private ownership turned out to be the policy imperatives, not monopoly and state ownership.

It is this potential to surprise, for events in the energy sector to turn out quite different from expectations, together with the long lives of assets, which create the special problems of the sector. The history of energy policy is one of shocks and surprises in the face of a succession of conventional wisdoms. That energy is, with labour, the primary input into economic activity, and the harnessing of fossil fuels has been the major factor in 20th century growth, simply magnifies—and politicises—the consequences of mistakes.

In this paper, I shall focus on the relationship between policy and the underlying economic fundamentals, as played out in the major shift in policy heralded by the 1979 election, and, in particular, by the arrival of Nigel Lawson at the Department of Energy in 1981. Although politicians have, in practice, little room for manoeuvre, Lawson recast the very rationale of energy policy, and the radicalism of this initiative can be seen in the gradual unfolding of the privatisation and competition programme across the whole of the sector in the two decades that followed. Although there was no masterplan or blueprint, the underlying philosophy did change policy, and, as a change in direction, the natural comparator is that of the 1945–51 Labour government and the creation of *national*, rather than local monopolies in the state sector. Indeed, Lawson's policy was almost the exact opposite—competition, not monopoly; private ownership, not nationalisation. Of course, not all of this is down to Lawson, and he did operate in a new political climate. However, it is noticeable that it took the Europeans a decade to catch on, and that the United States did not seriously embrace retail competition until the second half of the 1990s. Britain could easily have followed the German model. (Indeed, but for the Falklands War, Michael Foot could easily have become prime minister in 1983.)

Transitions—which are what Britain has witnessed since 1982—are both more complex and more interesting than end states. The energy market will never become fully competitive. There will always be elements of national monopoly and oligopoly, but the path has become detectable, and policy since 1982 has shown a remarkable consistency, despite the frequent wobbles, particularly over coal.

Transitions rarely end, but they can be blown off course. Shocks and surprises have a nasty habit of undermining investments, and political fashions change. Since Lawson's initiative, there have been three secretaries of state for energy (Peter Walker, Cecil Parkinson and John Wakeham), and three subsequent ministers (Tim Eggar, John Battle, and now Helen Liddell). The five secretaries of state for trade and industry since the energy department was abolished have all had major inputs too—Michael Heseltine over coal in 1992–93, Ian Lang over takeovers and restructuring, Margaret Beckett over regulatory reform, Peter Mandelson over coal and the policy context, and Stephen Byers over Pool reform. Of these, Mandelson's intervention captured in the White Paper has been the most significant, and is, I shall argue, the most confused, and could yet prove the most damaging.

The structure of the paper is as follows: section II, sets out a stylised version of Lawson's approach, to be followed through the transitory arrangements by an overview of the main milestones in its implementation: privatisation, the decline of coal, and the opening up of the electricity and gas markets (section III). Section IV looks at the ways in which the competitive approach has been modified and adjusted, eventually producing the Mandelson White Paper. Section V provides a critique of the new policy, and section VI looks forward more speculatively to what might emerge for policy in the 2000s and beyond.

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II Lawson's Market for Energy

When Lawson became Energy Secretary in 1981, the policy agenda was dominated by coal and the threat of a miners' strike. There had already been one climb-down in the face of pressure from the NUM, and Lawson's predecessor, David Howell, had been preoccupied by coal stocks, and the aftershocks in the oil market of the second OPEC price rise.

Lawson brought three main components to energy policy—a clear and simple set of beliefs, a gradualist approach to reform, and an activist approach to appointments. By the time he became Chancellor, he had rewritten energy policy, put two significant pieces of legislation on the statutes—the 1982 Oil and Gas (Enterprise) Act, and the 1983 Energy Act—and put in place a very different set of managers in the nationalised industries.

The fundamental tenet of Lawson's approach was a preference for markets over planning, which had its origins in the economic liberalism of Hayek and Friedman. Lawson saw the planning activities of the CEGB as fundamentally misguided, particularly the attempts to predict demand and supply. Incentives too, were inappropriate; failures of monopolists would extend through to investment. The CEGB was unlikely to build either the right amount of plant, or the right sort. Implied rather than stated in this approach was a rejection of state ownership. Prior to the 1983 election (and the Falklands War, which transformed the Conservatives' election prospects), the concept of privatisation was far from the conventional wisdom it became. However, it was obvious that state ownership was inconsistent with a market approach to investment appraisal and decision-making.

It was natural for Lawson to stress the role of markets rather than that of the state. Yet, his view was not anti-government; rather, he was concerned to sort out their respective roles. In one of the most important speeches on energy policy in the post-war period, in 1982, he set out the new position.

> *I do not see the government's task as being to try to plan the future shape of energy production and consumption. It is not even primarily to try to balance UK demand and supply for energy. Our task is rather to set a framework which will ensure that the market operates in the energy sector with a minimum of distortion and energy is produced and consumed efficiently.*

Most attention has subsequently been paid to what governments (and by implication, the CEGB) should stop doing. The more complex and difficult problem, of what the role of government and energy policy is in a private and more competitive energy market, was left largely unconsidered (at least in theory).

The speech was, of course, only a guide and an aspiration; in practice, the government remained very active—preoccupied by the miners and promoting nuclear energy. With cheap and abundant energy supplies (not least because of the impact on industrial demand of the 1980–82 recession), security of supply meant coal stocks and plant flexibility to beat the miners, not external shocks.

Yet, even the coal problem had its solution in the new approach to energy policy. Breaking the power of the NUM meant breaking the market power of the NCB and the CEGB. Only through a vertical chain of monopolies, with captive customers, could costs be passed through to final customers. It was a cost-plus regime which did not even require rate-of-return regulation. Where the full costs (including capital) were greater than industrial and domestic customers (and voters) were prepared to pay, the Treasury provided the implicit subsidies. Indeed, until the Byatt Committee began to address these issues, there was no proper asset value. (It was very much like the French government arrangements with EDF and GDF today.)

Breaking monopoly in the labour market, therefore, required breaking monopoly in the product market. The long-run answer to Arthur Scargill turned out to be restructuring, privatisation, and full wholesale and retail competition—a process which would take at least two decades.

III Implementation—the Transition to Competition

The first steps toward the market approach were, in retrospect, very timid. The 1980 Competition Act had opened up nationalised industries, and they were subsequently exposed to a series of MMC investigations. Lawson's two Acts went further. The 1982 Oil and Gas (Enterprise) Act put an end to British Gas's expansionist North Sea plans, particularly its oil-related activities, which were hired off into Enterprise Oil. Henceforward, British Gas would primarily be vertically integrated by contract rather than ownership. Its network was also to be opened to others. The 1983 Energy Act made two further important steps towards competition. The Area Boards would be compelled to buy privately generated power at published tariffs, and common carriage would be available for large users.

The 1983 Act had much in common with the European directives at the end of the 1990s, particularly as applied to France. The dominant incumbent, the CEGB, remained integrated, and it had a monopoly of information. The *right to access* meant very little without detailed access and pricing regulation. Similarly, the *right to sell* was only helpful if the prices (and ancillary terms) were appropriately set. As the subsequent evolution towards competition was to show, *regulation for competition* is a necessary condition for markets to flourish—a further role of the state which Lawson (understandably) neglected. Competition does not happen spontaneously—the property rights have to be designed and enforced.

The two Acts failed in their aim to promote competition. If it was to develop, more radical interventions were necessary. Unfortunately, the miners' strike intervened, and Mrs Thatcher's long-awaited political battle dominated the 1983–87 government. Peter Walker, whose economic philosophy had much more sympathy for national champions and monopoly, took over at the Department of Energy, and presented a more corporatist approach. With the CEGB, through careful planning, the miners were defeated. British Gas, which had centrally planned and developed the natural gas transmission and distribution network, was privatised as an integrated monopoly and presented to an army of 'Sids', each assured that there was no prospect of retail competition. Wider share ownership was easier where a relatively riskless monopoly was on offer.

It was left to Cecil Parkinson (with Lawson in support at the Treasury) to reinvigorate the market approach to energy through the privatisation of the electricity supply industry. The privatisation has been much criticised for its timid

(continued on page 18)

approach to competition in generation, but, at the time, major concern was focused on whether the splitting of the grid from generation would be consistent with security of supply. The politics heavily constrained the restructuring—within the plan to build a family of ten PWRs in obvious conflict with the economics of the market. The structure adopted was a fudge, which subsequently unwound—National Power was to be made big enough to be able to use its dominance to impose nuclear costs. As it subsequently transpired, Lord Marshall, Chairman of the CEGB, had been right: only by keeping the CEGB intact could a nuclear programme prosper—as the French were to demonstrate. Restructuring the CEGB spelt the end of the nuclear dream, which prospered only in France through the integrated EDF.

The radical new structure proved workable in the short run—primarily because an open compulsory pool was created, independent of the generators, and because most of the economics were embedded in Vesting contracts. These protected the miners until after the next election (and especially the UDM miners who had worked through the strike), and domestic customers' prices were capped through the back-to-back contracts between British Coal, the generators, the regional electricity companies (RECs), and the regulated final market.

In the medium term, *after* privatisation, the market would gradually be made more competitive: a transition of eight years (and two general elections) provided for the coal industry to face the market in 1993, gave medium-sized firms the option to choose suppliers in 1994, and allowed full retail competition in 1998. Although not envisaged in the transitionary plan, virtually all the rest of the sector would, eventually, also be privatised, from British Coal to Nuclear Electric and (probably) BNFL. In the end, only a rump Coal Authority and (probably) a residual nuclear authority will be left fully state-owned.

The transition inevitably threw up lots of surprises, many of which were extremely important to the participants, but which will be lost in the history. Three broad features did, however, emerge—the importance of regulation for competition, the powerful forces for reintegration, and the enduring politics of the energy sector.

Perhaps the most naïve feature of the arrangements and the regulators' approaches to the transition was the belief that competition and deregulation go together—that, as the market is liberalised, regulation could wither away. It had its origins in the Lawson market philosophy. Thus, regulatory supervision of the 1998 programme was notable primarily by its absence, as dominant supply businesses were left to develop the necessary IT infrastructure to enable rivals to take away their customers. It turned out to be an extremely expensive programme, delivered late, and the system's flaws were (mercifully) largely hidden from the public gaze by the fact that not many customers wanted to switch. The full costs—and the limited benefits from a demand-profiled system—will probably never be known, especially as the Pool reform will introduce a new raft of changes, disguising much of the redundancy and failures in the existing system. The very idea that 14 monopolies, without major IT experience, could be left to get on with designing and implementing major IT systems *separately*, when these all had to interact with the Pool is, in retrospect, one which no other country should try to emulate.

Regulation, too, did not wither in the generation sector of the market; rather, repeated conduct and structural interventions were required. A whole battery of activity followed privatisation, from inquiries, Pool price caps, divestments, Pool reform, and entry bans.

The second, related, feature of the transition has been the reintegration of the energy sector. Faced with downstream competition, the legally binding monopoly relationship between upstream sunk costs and customers has been broken. Vertical reintegration is a response to opening up the retail market—to hedge along the vertical chain and attempt to preserve a *de facto* monopoly, where a *de jure* one has been removed. The public-interest response might have been quite different; to encourage the growth and development of futures markets to spread the upstream sunk costs, dealing with the risk without allowing the creation of market power.

This was not to be, largely for political reasons. Ian Lang, who succeeded Michael Heseltine at the DTI, allowed ScottishPower to take over Manweb, and heralded in the great American takeover wave. He balked at the PowerGen and National Power acquisitions of Midlands Electricity and Southern Electric respectively, but largely because of the pressure from Redwood and Lamont on the right of the party. His successors, Margaret Becket and Peter Mandelson, let vertical integration through. This might not have mattered if generation and supply had been separated by an open, compulsory, Pool, as the MMC recognised in its reports on the PowerGen and National Power bids. However, the proposed new electricity trading arrangements (NETA) abandon the main features of the Pool, allowing bilateral contracting in a voluntary (and, therefore, probably pluralistic) fashion. We return to this point below.

The third feature has been the politics, and, in particular, those of coal. The original transition provided for the ending of the subsidy and protection of coal in 1993. Contracts would thereafter be market-driven. In practice, neither the Conservative nor Labour governments have been able to withstand the political pressures. Both have propped up the miners—in the Conservative case, by further explicit back-to-back contracts at higher prices and volumes than dictated by the market (hence encouraging excessive gas entry); in the case of Labour, as part of the complex politics of new versus old Labour. The latter led to the Mandelson White Paper, dealt with below in the next section.

Politics has also influenced regulation. The windfall tax opened the way for energy to augment the traditional income and expenditure tax bases. The utilities have subsequently found themselves financing social and environmental policies, and the proposed Climate Change Levy is the latest intervention. There is no evidence to suggest that energy will become less political, and, indeed, a central weakness of the Lawson approach has been to imagine that it could become a normal commodity activity, like the rest of British industry.

IV Mandelson's White Paper

Notwithstanding the numerous deviations from the transitionary path, it is remarkable how much of it survived the 1990s, and, in particular, the change of government. By the time of the 1997 general election, it was possible to imagine serious Labour politicians saying what Lawson had said 15 years earlier. It had become conventional wisdom.

The windfall tax lanced a (largely political) boil, which Labour had used to represent what they deemed to be wrong with Conservative Britain—'fat cats' and high profits, at the expense of social responsibility and 'proper' regulation. It was part of Labour coming to terms with its inheritance (rather like steel had been to the Conservatives in the early 1950s). John Battle, the new energy minister, rolled up his sleeves symbolically, and embraced the 1998 competition programme. It remained to announce 'a review' of regulation, which was, at the outset, anything but radical.

There were, however, differences between Labour and the Conservatives. Labour had a wider set of objectives, which incorporated social and environmental objectives. The DETR concluded its Kyoto round with a 12.5% reduction target for a basket of greenhouse gases, and the government additionally pledged a domestic CO_2 reduction target of 20% by 2010. The former looked, and looks, easy to achieve; the latter may be close to impossible. A 10% renewables target was set and the Treasury has adopted an industrial energy tax. The implication for energy of the new environmental policy was relatively obvious: coal had little future.

By adopting economic instruments, environmental policy could be grafted onto the market approach. The sector would adjust to the appropriate price/tax signals. Unfortunately, at this juncture, the coal crisis broke, in the run-up to the expiry of the 1993–98 special contracts that Heseltine had brokered.

From the outset, the coal crisis was political—a case study in the tensions between old and new Labour. The ministers responsible for trying to resolve the tensions were primarily those who needed friends on the left—Geoffrey Robinson and Peter Mandelson. They had to come up with a 'deal' which could meet the conflicting criteria—pro-market and pro-competition, pro-environment, and pro-miners.

The eventual 'deal' was a complex fudge which owed everything to short-term political interests. It was multi-faceted, and the connection between the components remains obscure. The generators bought more coal; PowerGen was allowed to vertically integrate with East Midlands (and National Power followed with Midlands Electricity's supply business); a moratorium on new gas entry was announced; Pool reform was endorsed; the generators agreed to divest plant; and the environmental policy embraced an energy rather than carbon tax (the Climate Change Levy).

Government officials strenuously deny that a 'coal deal' had been done, and the White Paper that emerged provided a 'spin' reconciling the contradictions. It claimed that the problems of coal were the product of the market being 'rigged' against it. Apparently, the Pool allowed generators to hold prices up, sucking in excessive (gas) entry, thereby displacing coal-fired plant, and forcing it to close early. Hence, the gas moratorium would provide a 'temporary' pause, while the Pool was reformed, and a level playing field created. The environmental side was squared by broadening the definition of sustainable development to include not just environmental matters, but social ones too. The new definition could be made to fit almost any policy, including supporting the coal industry. The resulting new energy policy would be one that promoted security of supply, diversity and sustainability, and that was consistent with promoting competition. It was a triumph of 'spin' over substance.

A cursory glance at the history of the 1990s shows that the core argument has little support. Coal was protected through *higher* prices as a direct result of the 1993–98 deal. Any monopoly pricing was readily transparent through the (compulsory) Pool. Prices could have been reduced by firm regulatory action to break market power, and by the government's acceptance of the consequences for coal. The 'excessive' gas entry directly contributed to the meeting of the previous set of CO_2 and SO_2 targets. Banning entry cannot be regarded as pro-competitive, even in the short run, and the facilitation of voluntary contracting can only make abuse of dominance harder to detect.

V The Consequences of Mandelson's White Paper

Far from clarifying the role of government in energy markets, Mandelson's White Paper leaves most of the key questions unanswered. These include: the future of licensing policy, the trading arrangements, the incorporation of environmental considerations, and the relationship between government and regulators.

The *policy position on licensing* in the White Paper is that, once the Pool has been reformed, the moratorium will be lifted. Thus, sometime in 2001, a return to the liberal approach will be permitted. There are many reasons why this is an unlikely scenario. The timetable for the Pool reforms may be much more drawn-out than currently anticipated. But, even if it were to be completed on time, it is far from clear that the government would permit the anticipated further dash for gas to materialise.

In addition to the desire to smooth out investment, there are other reasons for a more controlled approach. Security of supply and diversity will not necessarily be optimally provided by the current structure of the market unless excess supply turns out to be a permanent feature. Governments are not necessarily better at such judgments (as Lawson pointed out), but the very fact of intervention indicates that Labour will want to continue to have a handle on this policy instrument. The environmental impact might be dealt with by market instruments, but the choice of a broad energy tax base over carbon suggests that the first-best approach will not be taken, and a degree of regulation may be necessary. Indeed, the 10% renewables target is, in effect, a licensing policy, with government backing some technologies over others (and almost certainly discriminating against nuclear compared with other non-fossil fuels).

If a more active licensing policy is to be a permanent feature of energy policy, then there are a number of choices over design. It could, and, indeed, most likely will, be discretionary and driven by government. Licensing policy gives political leverage, and ministers may well come to enjoy the powers of patronage, especially if promoters of new projects strive to make them politically acceptable. However, such a policy, raises uncertainty, and, hence, the cost of capital. Furthermore, in the absence of any rigorously tested criteria, it is unlikely to produce the optimal capital stock.

There are alternatives, both institutional and in substance. The government need not administer an activist licensing policy—it could be left to an arm's-length body. This could be an Energy Agency, separate from the detailed regulatory activities of OFGEM. In substance, the policy could be given some hard content through measurements of security of supply, and environmental indicators. These would necessarily cover the system as a whole, and then

(continued on page 20)

Energy Policy Since 1979 *(continued from page 19)*

consider the marginal impact of a proposed new power station.

Most attractively, and more consistent with the market approach, the licences could be auctioned, thus allowing a market for licences in place of free entry.[1] The auction could take a number of forms, from a pre-specification of technology through to an open auction, which could identify the cost of choosing a more expensive option to meet the licensing policy criteria.

Measurement would, however, require government to be much more precise about the market failures the policy was designed to solve. The confusion between security of supply and the derivative requirement of diversity (which is *one* means towards security) would need to be resolved, and the trade-off (and price) of different levels of emissions would need to be defined. There is little evidence that the institutions of government—the DTI and DETR—are likely to be enthusiastic about such clarity, an issue to which I return below.

The *reform of the Pool* was embraced by Mandelson, as a way of presenting the unpalatable fact of support for the coal industry. It gave the White Paper a pro-competitive spin. Pool reform was supported for a variety of reasons, some of which are spurious. At its heart, the White Paper needed to make a direct connection between the decline of coal, the exercise of market power, and the design of the Pool.

That connection centred on the core features of the Pool—marginal bid price determination, the lag between bidding and price determination, and the pricing of capacity and compulsion. It has been argued that the Pool mechanism makes it easier for generators to collude because it focuses price determination on the major generators' marginal plant, and facilitates confidence in oligopolistic collusive behaviour. Added to these pricing issues is the rigidity of Pool governance and the lack of institutional flexibility in rule changing.

Many of these criticisms are valid, but none entails the RETA proposals which have now been translated into the NETA programme. The system marginal price *is* the efficient price, and the pay-as-bid reform simply increases the number of 'guessers', creating an element of uncertainty, and, hence, 'noise' in the price. Similarly, the time lag between bidding and price determination can be shortened. Governance can also be changed. Yet, these three reforms are evolutionary, and can easily be accommodated in the existing Pool framework. There is nothing radical or particularly demanding about any of them.

Reforming the capacity payment regime is more difficult. There can be little doubt that the VOLL/LOLP regime fails to signal the needs for future investment, and that it can facilitate the abuse of market power. Yet, it does not follow that simple abolition will solve the investment problem. At present, entry is attractive because of the technical substitution—cheaper gas for more expensive coal and nuclear. The entrants are queuing up. But such a circumstance may not last, and a necessary condition for a well-functioning market is that it provides remuneration for the sunk capital costs of new investment. There is no evidence to suggest the RETA/NETA proposals meet this condition.

The final component of Pool reform—compulsion—is the most important. Compulsion enforces a standardisation of contract form in the Pool, and facilitates liquidity and transparency. It creates a marker for both contracts and futures. By contrast, voluntary arrangements encourage proliferation of contract forms, reduce liquidity and make the abuse of market power—particularly through vertical integration—harder to detect. It follows that, far from reducing market power, NETA may well increase it, and undermine the transfer of upstream sunk cost risk from customers to financial markets, which is the most important requirement of breaking the monopoly link through supply competition.

There is, however, little evidence that the RETA/NETA promoters have thought these issues through, and, indeed, the highly technical nature of the issues involved, combined with the vested interests of the main participants, have militated against a proper consideration of the public-interest issues raised. The programme has not even been subject to an analysis of the costs and benefits, save merely to assert that overpricing by generators is of the order of £1.5m per annum, and that this reduction justifies the costs. (The other option—simply reducing the prices through effective regulation—has not been considered in this calculation—even if in the unlikely event the £1.5m turns out to be correct.) If regulators could *know* the extent of overcharging, then it does not take NETA to solve the problem!

Mandelson's White Paper is concerned primarily with solving the coal problem, while maintaining some semblance of competition market credibility. It does not seriously engage with the central energy policy challenge since Lawson's speech—*the environment.* Coal is a highly polluting industry—mines produce methane, are energy-intensive and pollute underground water supply. Transporting coal is environmentally damaging, and burning it is a major cause of SO_2, NO_x and CO_2 emissions. Ash disposal and water extraction for cooling add to the environmental problems.

On the principle of 'polluter pays', endorsed by the government, coal should be a heavily taxed activity, and, on environmental grounds, the industry should be reduced as soon as practically possible. (On health and safety grounds, too, very large contributions of public funds are needed to deal with the damage done to miners—on a par with the BSE crisis costs.)

Thus, on ordinary economic and environmental grounds, the Mandelson White Paper is a retrograde step. But the contradiction with environmental policy is more pronounced when the 20% CO_2 emissions target is taken into account. Protecting coal has had two knock-on effects—the burden on the rest of the economy has gone up as the displacement of coal by gas has gone down; and the main policy instrument, the Climate Change Levy, has been given an energy rather than carbon base, to avoid taxing coal proportionally to the damage caused. A clearer example of the failure to achieve 'joined-up government' is harder to imagine.

There are other knock-on effects. The renewables policy will require greater regulatory intervention since the tax will not improve its relative position. The full benefits of prolonging the life of nuclear stations will not be reflected in prices. But perhaps the most serious impact will be to delay the full incorporation of environmental policy within the DTI's approach to energy policy.

[1] I first proposed this approach in 1992, in response to the first coal crisis.

If the main implication of the Mandelson White Paper is that the relationship between government and the market is a complex and multi-faceted one, it is important to sort out the *institutional framework* within which this is contextualised.

The Lawson model, as extended and developed by his Conservative successors, required an independent and technically directed regulator to deal with residual monopoly problems, and a diminished governmental function within the DTI. The Mandelson model, by contrast, requires both a bigger and more extensive regulatory body, and a much larger function within the DTI. Both are, not surprisingly, expanding in numbers and costs.

Mandelson's White Paper does not, however, trace through the implications for the design of institutions, nor the trade-off between them. Whereas the Lawson model requires only an OFGEM and a few officials, the Mandelson model requires a licensing dimension, a location for security of supply and diversity work, and an institutional interface with the DETR. Much more medium-term thinking is required.

It is far from clear that the DTI can, in its present form, meet these new Mandelson demands, nor that OFGEM should expand its role from regulation into policy. Its role in RETA/NETA is a good example of how it can overstretch its proper domain. The Energy Advisory Panel is a very part-time body, and it is unfunded. There are several options, and each has its merits and demerits. Some of the functions of the Department of Energy could be recreated in the DTI (as, in fact, they already are—for example, the longer-term nuclear review and environmental modelling). Another option is to create an Energy Agency, to sit alongside the Environment Agency (and, to a lesser extent, the Strategic Rail Authority). Broad sectoral bodies—for transport, communications, water and energy—may well be in the mechanisms for the more activist policy approaches of Labour. What, however, is clear, is that the Mandelson White Paper does not begin to address the implications of the intervention it has encouraged.

VI Conclusions: the Future of Energy Policy

The Lawson speech in 1982 heralded one of the most radical policy-driven transformations of the 20th century—to rank alongside the nationalisations of the immediate post-war years. The transition it started has by no means ended, and it probably never will, given that the underlying model—a competitive commodity market—is no more than an organising principle.

Since Lawson launched energy policy on this path, significant political obstacles have been confronted. The lasting impacts include the demise of coal and new nuclear build. For many, these were merely part of the painful transformation of the market and provided a series of temporary hitches along that path.

This simple and attractive interpretation is not borne out by the facts. The Lawson initiative has transformed energy policy, and it has become part of conventional wisdom. Yet, therein lies its danger. The most important facts about the period which will stand out to future historians are the (unexpected) collapse of oil prices and excess supply. The market philosophy had a very benign backdrop against which security of supply could not be tested. Furthermore, it will probably turn out to be the last period in which environmental policy was not the main driver.

The experience since Lawson's policy initiative has taught that, even when energy is cheap and abundant, politics will continue to play a key role. Energy is, next to labour, the main input into all economic activity. The 20th century's economic miracle is built upon the exploitation of fossil fuels; a fact which national income statistics fail to recognise. The political *agenda* has changed, and, hence, the form of political *concern* has altered too. Furthermore, the mechanisms of intervention are necessarily difficult when government no longer owns the main energy companies, and monopoly has been reduced.

It was, perhaps, too early to expect that redefinition to take place. Yet, whereas Lawson seized his opportunity to at least outline a new direction for policy, Mandelson's preoccupation with the miners prevented him from stamping any new vision on the sector. Indeed, in its main components—licensing, Pool reform, the environment and institutions—he has left behind a considerable muddle for his successors to sort out. In the case of Pool reform, the damage may be very considerable.

If Mandelson failed, his successors need not. If Mandelson's White Paper does not provide a coherent energy policy, then his successors could fill this gap. What is needed now is a serious and long-term review of the role of government in the energy sector, and a new vision of how this could be achieved. In any such review, the environment is likely to be the dominating feature.■