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Energy and Environment: Multiregulation in Europe

Edited by
Piotr Jasinski
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ENERGY AND ENVIRONMENT:
MULTIREGULATION IN EUROPE

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Foreword

Over the last twenty years, the concern with market liberalization and environmental protection to some extent shifted the emphasis of energy policy away from planning techniques towards regulation. The means as well as the ends of energy policy were changing. Thus market liberalization (and associated policies of privatization and corporate restructuring) often required the evolution of an explicit system of economic regulation, backed up by the application of competition policy while environmental protection was often pursued by a variety of regulatory mechanisms (including the establishment of independent monitoring agencies). Regulation rather than ownership, taxation or direct intervention became the principle mechanism of policy. However the regulatory processes were often very different - models of economic regulation erred towards simplicity (or as much as was possible), leaving producers and consumers with considerable autonomy, while environmental models were often premised on technical standard setting, implemented in a somewhat heavy-handed way.

Moreover the contrasting regulatory styles went deeper, encompassing conflicts of principle. To put it simply, if regulation for market liberalization was concerned to reduce energy prices, the environmental perspective was concerned with increasing them (or at least with the aim of imposing the full environmental costs of energy production upon consumers to encourage them to use energy in more environmentally friendly ways). Of course many argue that such conflicts need not necessarily happen - if negative externalities are internalized into prices in an 'economic' manner then there is no clash between the goals of environmental protection and an open market. Yet in practice the goals have often clashed not least because of the very different perspectives and interests of those engaged in the policy debate on these issues.

These developments resulted in there appearing the problem of multiregulation: environmental and energy regulation (and policies for that matter) had to be harmonised, and so had to be at the EU and national level. The former was partly a consequence of growing awareness of environmental problems and of liberalisation of the energy sector in which the old model of regulation through public ownership was no longer appropriate.

At the same time, the European Commission was worried that divergent national approaches to these problems would result in considerable distortions. The papers presented in this volume show how real and difficult these issues were and still are.

Coal, electricity and non-fossil energy sources are the sectors where the conflicts between different regulatory and energy policy objectives are most apparent. In each of them EU policies have attempted to address the shortcomings (whether in competition or environmental terms) and to solve any conflicts that might have appeared.

The coal sector illustrates the conflicts between different energy objectives. On the one hand, there is a significant solid fuel resource within the EU, one which arguably contributes to a degree of energy self-sufficiency. On the other hand, that resource is both relatively expensive - *vis a vis* external competitors - and highly polluting. Thus the traditional arguments for supporting the sector appear to be overruled by other concerns. Unless serious energy market disruption takes place in the next few years the steady erosion of coal's place in EU energy balances seems inevitable.

An agreement to liberalize the electricity market was eventually reached in 1996 after further watering down of the original proposal: competition was only to be introduced for the largest consumers with a gradual opening of the market over nine years. Countries were to be able to opt for either 'negotiated third party access' or a 'single buyer' system (the latter preserving to some extent the position of the single vertically integrated utilities which enjoy a near monopoly in some member states), though in both cases the different components of the market (production, transmission and distribution) had to be 'unbundled' (a separation of accounts for each component). While the agreed reforms fall short of outright deregulation, it is clear that many member states are considering (and some such as the UK and Sweden have already implemented) more radical reforms.

At the same time however, the environmental consequences of power generation have also been considered. Starting with attempts to limit emissions of sulfur dioxide in the 1980s (a measure which focused on power plants though not exclusively), the Commission has sought to encourage cleaner generation of power.

What determined how individual Member States approached various aspects of the problem of multiregulation was that their priorities differed considerably and so did the speed with which they introduced market reforms in their energy sectors. The United Kingdom definitely led the way

as far as the latter is concerned, and environmental pressures seemed to have been much stronger in Germany.

The problem of multiregulation in Germany currently materialises itself in the form of two debates: on energy efficiency and on support to renewable energy sources on the one hand and on introducing energy taxation outside of the transport sector on the other hand. After a break of several years, energy efficiency is again becoming a subject matter of academic and political discussion. This time however, in contrast with the 1970s, the whole issue cannot be simply reduced to the necessity to respond to an increase in energy prices. In nominal terms, oil prices are at the same level as ten years ago, which means that in real terms they fell considerably. The renewed interest in energy efficiency cannot be explained by energy prices for consumers either, as internalisation of external costs has not yet taken place. On the other hand, the problem of exhaustible energy raw materials is not pressing at the moment because every year the amounts discovered exceed those extracted and consumed.

There is also no doubt that there exists substantial potential to develop renewable energy source in Germany, but as long as their development requires some kind of support the main question is how to make this support compatible with the increased reliance of market forces in the German energy sector. The Electricity Feed Law, which is the most effective instrument of promotion of renewable energy sources is not supported by an overall consensus nor designed to take into account a long term perspective. Thus alternative protection and promotion measures have to be considered regarding the future of renewables in the changing German energy.

In the United Kingdom, the electricity supply industry (ESI) in general and the nuclear power in particular are good examples of interactions between economic and environmental regulation. Saving the virtually bankrupt nuclear power stations could in theory lead to potentially considerable benefits for the British economy, the British taxpayers (the revenue from privatisation) and for the environment, but none of these benefits was uncontroversial, and there were substantial trade-offs involved, especially from the point of view of the effect of exploiting these benefits on the coal industry. All of this had to be achieved in parallel with attempts to introduce competition to the ESI and to establish independent regulation for that sector. As first best solutions were virtually impossible to find, the whole exercise became an exercise in expedient policy making and it is precisely from this point of view that one has to look at it.

Once the nuclear element of the fossil fuel levy has been discontinued, and the UK nuclear industry is showing operating profits there is a clear opportunity to review the functioning of renewables support in the light of this change in context. If one accepts that there is a case for government support for renewable generation on positive externality grounds then there are several financing options available to government, perhaps the most attractive of which, especially on grounds of simplicity, is that of general taxation. However, even if one sees the role of government rather as 'enabler' than 'provider' then there does appear to be a feasible market solution that could be attempted.

Just as for the Member States of the EU the issue of multiregulation has necessarily a European dimension, so the desire to join the EU adds such a dimension to the effort currently being undertaken by the countries of Central and Easter Europe which want to join. In their case, however, one must not forget that the direct context in which the problem of multiregulation is being solved is that of systemic transformation of their economies and political systems. The chapters on Poland and Lithuania well illustrate what it all means in practice.

In Poland the issue of multiregulation found its institutional form once the Energy Regulatory Authority was created, following the 1997 Energy Act. At the same time one has to remember that over the last decade Poland has been and still is a transition economy, struggling with its centrally planned history and trying to jump start market mechanism both in the economy as a whole and in its individual sectors.

Lithuania, like other former communist countries, has been facing many difficulties in restructuring from a centrally planned economy to a market related one. The move to commercialization, liberalization and introduction of private finance in the energy sector has led to a reconsideration of the appropriate industry structure and also a move to a new type of regulation. With decentralization and liberalization of the national economy the main goal of the energy policy should be: preparation of laws, setting of the priorities and control mechanisms. Energy sector regulation and supervision, management of state owned enterprises, research and development, new plants and design should be transferred to independent regulatory institutions and the private sector. The main functions of the independent regulatory institutions should be the protection of energy consumers interests and rights, implementation of consistent pricing system and the regulation of natural monopolies.

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1 Reconciling EU Energy and Environment Policy

FRANCIS MCGOWAN

1. Introduction

In this chapter, we review the interaction between energy policy and environmental policy at the EU level. The aim is to consider both how conflicting objectives have emerged in EU policy in these areas and how they have been resolved. The paper does so by considering the extent to which broader objectives (such as protection of the environment and the promotion of competition) have been integrated into sectoral policies (such as energy) and identifying unresolved issues and potential sources of conflict. In effect, the traditional pattern of energy policy-making with its emphasis on supply security has been increasingly challenged by environmental and competition concerns, in the process giving a much more 'regulatory' focus to the process of policy-making. Indeed the influence of the EU is greatest where these regulatory mechanisms are to the fore. Yet these different regulatory processes and priorities may be in conflict this raises the problem of how multiple regulation operates in practice - can the formulation of an EU energy policy provide a means of reconciliation?

The paper is in three parts. The first paper considers the evolution of energy policy in the last few decades (the long term perspective is necessary to understand just how far policy priorities have oscillated), concentrating on both the integration of new concerns into policy and the growing role of regulation as a policy mechanism. The second looks more concretely at EU energy policy and its development, again taking a long term view - not only does this show how such wider concerns have been articulated in a European setting but it also draws attention to the role of the EU and how policy changes have provided opportunities for the more substantial development of EU policies in a changing policy context (not least as a result of the growing regulatory dimension, a development which privileges the involvement of EU institutions). The third section considers the principal subsectors of the energy industry, reviewing their overall position

within Europe (in terms of supply, demand, environmental impact, industrial organisation) and considering how policies towards them are complementary or conflictual. Finally we conclude with some thoughts on whether and how these different objectives can be integrated at the EU level, noting recent debates on devising an EU Energy Policy.

2. Traditional energy policy concerns and the rise of new agendas

Historically energy policy has been dominated by two objectives - to maintain secure supplies of energy resources and to keep prices of energy resources as low as possible. These two objectives, apparently reinforcing but often conflictual, have shaped decisions on the portfolio of energy resources (the types of fuel and their provenance) which are used in a particular country. It is worth noting that although 'energy policy' is a relatively recent innovation (broadly since the 1950s, intensifying in the 1970s) concern over the prices and availabilities of fuels dates back much further. Moreover, governments have been prepared to intervene to meet these objectives. This intervention on occasion took the form of diplomatic and even military interventions but more commonly involved an activist approach to organising - and even owning a stake in - the energy sector. Indeed until recently, the energy sector was one of the principal vestiges of the planned economy within western societies. Energy markets were characterised by long term planning horizons, protectionism, widespread monopoly or collusion between the principal firms, with the state at the centre of many of these activities. Moreover the strategic nature of energy - and the rationale for extensive intervention - often went far beyond the supply security issue, meeting a wider range of public policy objectives (such as employment, regional development, R&D, supplier industries and macro-economic policy). While the range of objectives which governments (and producer interests) sought to meet through energy policy was arguably contradictory and overwhelming, we should not forget that during this period both prices and emissions fell. While it might be argued that these reductions were due to technical factors, defenders of the old regime might argue that those technical choices were only possible because of the institutional context and the ensuing policy preferences, priorities and processes.

It has only been in the last twenty years (and in some respects the last ten) that the preferences, priorities and processes of energy policy have

been seriously redefined. Prior to then the concern with supply security - a long term concern magnified by successive oil crises and the perceived short term strength of Opec on the one hand and the perception of natural resource scarcity in the longer term on the other - had to a large extent prevailed. Increasing self-sufficiency and technical fixes were the keystones of policy, though interestingly the 1970s energy crises also prompted a close examination of the possibilities for energy efficiency and alternative (in the widest sense) sources of energy. The catalyst for change was obviously the energy shock of 1986 - when it became clear that not only were supplies plentiful but that producers were anxious to sell to a buyers' market. In that context the worries of many over supply availability were overshadowed by those seeking price reductions - the scarcity culture of the 1970s gradually eroded as did the status and credibility of those whose claims rested on that culture.

In those conditions the profile of 'new' issues rose acutely. The first major change was on market liberalisation. While there had been indications of a need to deliver cheap energy in the past these had historically been met as a result of long term technical factors (new technology, new reserves, etc.). In a sense the shift in the late 1980s was towards market liberalisation as the mechanism for low (or lower) prices. Moreover, the consumer perspective became much more important as users sought to gain the advantages of open markets over the prevailing arrangements and were no longer prepared to pay the high 'premiums' associated with supply security driven energy policies. (These shifts in interests and preferences were reflective of much broader developments of course.)

Yet at the same time, the consequences of energy production and consumption were figuring in public debates. Fears for the environment, stemmed in part from resource depletion concerns but they also related to how energy was used and which technologies were chosen. Thus issues such as acid rain and nuclear power became highly sensitive politically, reflecting a shift to concerns over the 'quality' of energy supply. This emphasis has, ironically, reinstated the claims of many of those groups who had previously based their claims on a supply security basis: nuclear, renewables and efficiency have variously been pointed out as possible solutions to the emissions problem.

Moreover the concern with market liberalisation and environmental protection to some extent shifted the emphasis of energy policy away from planning techniques towards regulation. The means as well as the ends of energy policy were changing. Thus market liberalisation (and associated

policies of privatisation and corporate restructuring) often required the evolution of an explicit system of economic regulation, backed up by the application of competition policy while environmental protection was often pursued by a variety of regulatory mechanisms (including the establishment of independent monitoring agencies). Regulation rather than ownership, taxation or direct intervention became the principle mechanism of policy (Rees, 1986). However the regulatory processes were often very different - models of economic regulation erred towards simplicity (or as much as was possible), leaving producers and consumers with considerable autonomy, while environmental models were often premised on technical standard setting, implemented in a somewhat heavy-handed way.

Moreover the contrasting regulatory styles went deeper, encompassing conflicts of principle. To put it simply, if regulation for market liberalisation was concerned to reduce energy prices, the environmental perspective was concerned with increasing them (or at least with the aim of imposing the full environmental costs of energy production upon consumers to encourage them to use energy in more environmentally friendly ways). Of course many argue that such conflicts need not necessarily happen - if negative externalities are internalised into prices in an 'economic' manner then there is no clash between the goals of environmental protection and an open market. Yet in practice the goals have often clashed not least because of the very different perspectives and interests of those engaged in the policy debate on these issues. This will be seen in the next section when we look at how different objectives have been incorporated into EU energy policy.

3. EU energy policy in principle and in practice

The EC attached great importance to the energy sector: two of the three treaties on which the EC is based are specifically concerned with energy - the European Coal and Steel Community (ECSC) and Euratom Treaties concerned the coal and nuclear sectors - while the third treaty, forming the Economic Community (EEC) covered other forms of energy. In each case, the aim was to promote a common market amongst the member states while also preventing unfair competition. Even the special nature of some energy sectors - tendencies to monopoly - were covered by the Treaties. Yet there has always been a large gap between the intentions expressed in the Treaties and the outcomes in terms of European policies. The Commis-

sion's attempts to develop an energy policy of any sort, let alone one reflecting the ideals of the treaties, proved to be only of limited success as attempts to coordinate national policies first in the coal sector and then more generally came to very little (PEP, 1963; Lindberg and Scheingold, 1970).

The merger of the Communities in 1968 saw the Commission renew its efforts to develop a CEP. In its document 'First Guidelines Towards a EC Energy Policy' (CEC, 1968), the Commission noted that barriers to trade in energy persisted and stressed the necessity of a common energy market. Such a market, based on the needs of consumers and competitive pressures would help obtain security of energy supplies at the lowest cost. However, even though the Council approved the strategy, it ignored most of the Commission's subsequent attempts to enact the proposals.

The 1968 proposals marked the high point of a market-focused energy policy. From the early 1970s onwards, Commission policy proposals reflected the shift away from market making towards supply security. This change was partly a result of the development of the Community's energy balances (growing reliance on imports, mostly oil for energy needs - see Table One) and the changes in global energy markets generally. In effect the Community as a whole was vulnerable to the oil shocks of the 1970s. Yet even then member states failed to coordinate policy in an EC setting (Daintith and Hancher, 1986; van der Linde and Lefeber, 1988). As a result the Commission attempted to develop a more strategic approach to the management of energy supply and demand. The 'New Strategy' (*Bulletin of the European Communities Supplement 4/1974*), which was only agreed to after much wrangling and dilution, envisaged a number of targets to be met by 1985 (COM(74)1960) and only a few legislative actions designed to restrict the use of oil and gas. Further rounds of energy policy objectives were agreed in 1979 (to be met by 1990) and 1986 (for 1995). The 1995 objectives included a number of 'horizontal' objectives, aimed at more general energy policy concerns, such as its relationship with other EC policies. Each round sought to build on the previous one, and although in general the goals appeared to be on target, in some cases they reflected a degree of failure either across the EC or in certain member states (COM (84) 88 and COM(88)174). In each case EU Energy Policy was more concerned with the structure of energy balances than with the structure of energy markets.

By the mid 1980s, therefore, the Commission had succeeded in establishing a place in energy policy making, but it was far from being central to member states' energy policy agendas. Instead, its role consisted of in-

formation gathering, target setting and enabling activities (the latter had a substantial budget for energy R&D and promotion). While these measures ensured that the Commission had an influence on policy, they were not without problems - some of the objectives were showing few signs of achievement while aspects of the Commission's funding strategies were also open to criticism (Cruickshank and Walker, 1981). Moreover, aside from a few legislative measures, the Commission's policy had few teeth. The locus of power remained with national governments which generally chose to follow their own energy policies, resisting too strong a Commission role.

In the course of the 1980s, however, the agenda for energy policy began to change. Developments in energy markets, the attitudes of governments towards the energy industries and the overall position of the Commission in policy-making contributed to a turnaround in the concerns of EC energy policy. The new agenda rests on two broader objectives: the creation of a competition-oriented single energy market and the pursuit of environmental protection.

A key factor in the changed regime was the shift in energy markets. Prices stabilised and faltered in the early 1980s and continued to weaken until the 1986 oil price collapse. The reasons for this were more fundamental than the rows within OPEC which precipitated the fall in prices. The price increases of the early 1980s had the effect of boosting output in OPEC countries, as well as fostering exploration and production in the rest of world. Furthermore, many countries had sought to improve energy efficiency and diversify sources of energy. Economic factors - from the recession of the early 1980s to the rise of the service economy - also dampened demand. Taken together these factors led to a massive over-capacity in supply and minimal demand growth which forced down prices. The effects were not only confined to oil: gas and coal were in equally plentiful supply, while the consequences of past over-investment in electricity capacity also boosted the energy surplus. The combined effect of these developments was to weaken the scarcity culture which had prevailed among suppliers, consumers, governments and the Commission. As prices fell and markets appeared well supplied so the concerns of policy focused less on energy supply *per se* and more on the price of supply and existence of obstacles to the lowest price.

This change in market conditions made many energy policies, especially those fostering conservation or diversification from high price fuels, hard to sustain or justify. In any case, in some countries, governments