Sustainability *first*

Economic regulation and sustainability policy

Gill Owen

June 2004

Published by Sustainability First

Published in association with Centre for Management under Regulation, Warwick Business School

Sponsored by RWE npower

Acknowledgements

I would like to thank a number of people for their help as I was writing this paper. Firstly the trustees of Sustainability First – Phil Barton, Ted Cantle, John Hobson, Derek Osborn, Trevor Pugh and David Sigsworth – for their helpful comments on drafts and other support throughout. Secondly, Dieter Helm and Peter Vass for their comments on a draft. Thirdly, those in the regulatory bodies, government departments and consumer organisations who kindly agreed to be interviewed during the research phase. Finally RWE npower, and, in particular, Alison Cole, for their sponsorship of the work.

Gill Owen

Copyright © Sustainability First, 2004

Sustainabiltiy First
c/o CHPA
Grosvenor Gardens House
35-37 Grosvenor Gardens
London SW1W 0BS
www.sustainabilityfirst.org.uk

Gill Owen

Gill Owen is an energy policy consultant and Associate Fellow of the Centre for Management under Regulation at Warwick Business School. She chairs the Public Utilities Access Forum and is a member of the Government's Fuel Poverty Advisory Group and Ofgem's Social Action Plan Review Group. She is a former member of the Competition Commission and former non-executive member of Ofgem's board.

Sustainability First

Sustainability First aims to mainstream sustainability into public policy by developing new ideas on major environmental issues, such as climate change, waste and transport.

Sustainability First is a registered charity number 1078994

Contents

Executive summary 4

Introduction 6

Section 1: The 1990s – environmental issues emerge 8
The gas and electricity regulators and the Government's climate change policy 8
From EESOP to the Energy Efficiency Commitment (EEC) 10
Paying for water quality 11
The development of NETA 12
The approach to social objectives 15

Section 2: Taking regulation into the 21st century 18
The Utilities Act 18
The Energy White Paper 21
How Ofgem is now integrating social, economic and environmental aspects of sustainable development 21
The Water Act 2003 23

Section 3: Some key issues 25
Who decides – regulators or governments? 25
Do economic regulators need a sustainability duty? 26
What should be the respective roles of departments and regulators? 28
Issues in energy 28
Issues in water 30
Energy and water 33

Conclusions 34

References 35

Executive summary

When the utility regulators were established and in their early years their primary duties and role were focussed on economic regulation – setting price controls for monopolies and promoting competition where possible. However, they have had some environmental and social responsibilities right from the start and they have found themselves getting drawn more into these issues from time to time for various reasons. The increasing emphasis in government policy on sustainable development has led to further pressures on the regulators to pay greater attention to social and environmental concerns alongside economic ones. Ofwat now has a duty to contribute to the achievement of sustainable development, although the Government has to date rejected attempts to introduce a similar duty for Ofgem.

The sustainability agenda is at present being inadequately addressed in energy and water. There are differences in water and energy and each have lessons to learn from the other. However, greater clarity would be achieved by keeping economic regulators focussed primarily on the task of economic regulation. They should be required to take account of sustainability issues but this should not be their main focus. Other decisions should be taken by Ministers assisted by experts within their departments and in external agencies with a clear environmental and social remit.

As far as the social component of sustainability is concerned things are rather more developed in energy with the government having a clearer policy on helping those in fuel poverty than those who have difficulty with water bills. Because of this, the energy regulator has been required to develop a social action plan and social issues are firmly on Ofgem's agenda. In water the situation is somewhat different. The price of water to consumers has of course been a concern of the regulator and of Governments at the time of the five yearly price reviews. Efforts have been made to restrain price increases and the power of water companies to withdraw services has been removed statutorily to address social concerns. Nevertheless the need for substantial investment to meet environmental and other concerns has been the dominant driver in this sector, and prices are likely to rise further from 2005 following the current price review. In this context social concerns for poorer households severely affected by higher prices are likely to recur, and both DEFRA and Ofwat could learn from experience in the energy field to tackle water affordability issues.

On the environmental side the position is in some ways the reverse. In water, environmental needs are well expressed through regulatory requirements and the work of the dedicated Environment Agency to enforce them. The new duty on Ofwat to have regard to sustainable development, following the 2003 Water Act, may reinforce this trend though its detailed implications still need to be worked through. In energy however, there

is neither a sustainable development duty nor a body such as the Environment Agency that can ensure that environmental questions are taken into account in economic regulation. If the Government is to achieve the sustainable energy economy envisaged in the Energy White Paper, these gaps in the policy context and institutional framework need to be tackled.

Specific recommendations are:

- A duty to take account of sustainable development should be inserted into Ofgem's duties, given that this has now been done for Ofwat. The Government should accept the amendment that has been drafted to achieve this in the 2004 Energy Bill.

- The Government should consider either establishing a sustainable energy agency or giving an existing organisation, such as the Environment Agency, the power and duty to take part in key regulatory tasks, to ensure that environmental and economic considerations are balanced. As a way forward it is recommended that an appropriate body – such as the Sustainable Development Commission – should examine the institutional arrangements for delivering the Energy White Paper objectives.

- DEFRA needs to address social issues in water to ensure that low income and other disadvantaged households are adequately protected, in the face of rising water bills. DEFRA also needs to consider how Ofwat and the new water consumer body should contribute. The proposed review of water affordability for low income households should provide an opportunity to do this. Lessons should be learnt from the ways in which DEFRA, DTI and Ofgem are tackling fuel poverty.

- Government departments need to become more informed consumers of advice from economic and other regulators and agencies. This means adequate staffing – numbers and expertise – and would be assisted by reducing excessive turnover of staff and greater exchange of staff between government departments, regulators, other agencies, business and consumer organisations.

Introduction

Although the terms sustainability and sustainable development are used with increasing frequency it is by no means clear that those who use the terms are understanding them in the same way, particularly when it comes to using them for practical purposes such as determining policy choices.

For example, many people use sustainability and sustainable development primarily to encompass environmental protection issues. In particular, sustainable development is usually used to describe forms of development that integrate environmental concerns, as "development" in general is felt to downplay or ignore them. In developing countries the term sustainable development is perhaps more commonly used to encompass its broad meaning of reconciling the requirement for economic growth to meet social needs with minimising environmental damage. In the context of utility regulation calls for a sustainable development approach have arisen largely because the current approach is felt by some to prioritise economic over environmental concerns. Some groups concerned with low income and disadvantaged consumers also question the adequacy of the regulatory regime to address social issues.

The broad definition usually used by the Government (e.g. in the sustainable development strategy (DETR, 1999) is: "a better quality of life for everyone, now and for generations to come". This however, is not terribly helpful as a practical working definition. Perhaps more useful are the objectives defined in the sustainable development strategy.

"Sustainable development involves meeting the following objectives at the same time:

- social progress which recognises the needs of everyone
- effective protection of the environment
- prudent use of natural resources
- maintenance of high and stable levels of economic growth and employment"

This makes clear that sustainable development is not just about the environment; equal consideration must also be given to the economic and social aspects, although it does not indicate how trade-offs should be made when two or more of these objectives are in conflict. As will be described in these papers, such conflicts have arisen and have usually been dealt with on an ad hoc basis to date. Whether a more systematic approach to dealing with these trade-offs is feasible is one of the questions considered in this paper.

When the utility regulators were established in the 1980s their primary purpose was economic regulation – to develop competition where possible and to act as a surrogate for competition (by setting limits to the prices that could be charged) where it was not feasible

(such as in cases of natural monopoly). Alongside this was the duty to ensure that companies could finance their functions thus placing some limits on how far regulators could go in bearing down on prices. However, even from the start they have had other responsibilities and duties. Firstly, there has been a requirement to consider quality of service as well as price in their duties to protect the interests of consumers. Secondly, they have also had duties to take into account the interests of specific groups of consumers, such as the elderly and disabled and those who live in rural areas. Thirdly, there have been some duties requiring them to take into account the effects on the environment of the activities of the utilities that they regulate. Nevertheless, it was always clear, until the change of government in 1997, that the primary duties were economic and that other social and environmental duties were subordinate.

The Labour Government, elected in 1997, signaled its intention to review utility regulation and in early 1998 began to consult on proposals for change. Following on from this consultation the Utilities Act 2000 made a number of changes to the duties of the energy regulator – Ofgem – to raise the importance of social and environmental considerations alongside the economic ones. The Water Act 2003 will make a number of similar changes to the duties of the water regulator – Ofwat. But there are differences in the duties of the two regulators – most notably Ofwat will have a duty to have regard to sustainable development, whereas the Government ruled this out for Ofgem. This paper will explore how Ofgem and Ofwat handle the three aspects of sustainability – economic, social and environmental – in the context of the duties that they have and guidance that they are given by the Government and consider whether there is any need for changes to ensure that the water and energy industries operate in ways that contribute to rather than hinder sustainable development.

Section 1: The 1990s – environmental issues emerge

Although it was the election of the Labour Government that crystallised concerns about how the regulators dealt with social and environmental considerations, there were two specific episodes during the Conservative Government of the 1990s that had focussed debate on the role that the regulators should play in delivering the Government's environmental objectives. The first was in the energy field and the second in water and these are dealt with in the early part of this section. The later part of the section looks at another more recent example from energy and then at how social issues have been handled.

The gas and electricity regulators and the Government's climate change policy

In 1991 Sir James McKinnon, the then Director General of Ofgas, introduced the "E" factor into the British Gas price control. McKinnon said this was designed to counteract a distortion which allowed British Gas to pass through 100% of the costs of purchasing gas, but any investment to improve the efficiency of using gas, would be subject to the RPI-x formula. The "E" factor would allow the costs of energy efficiency projects approved by the Director General to be passed through to gas customers. Effectively its aim was to make it profitable for British Gas to invest in energy efficiency schemes that might result in less gas being used. McKinnon envisaged that around £50 million a year might be spent on these projects (though he set no specific limit).

British Gas decided to establish a charitable trust to administer this money, but the government's Energy Efficiency Office saw the initiative as a potential means of helping it to meet new environmental targets envisaged since the publication of the White Paper on the Environment (Cm 1200, 1990). Discussions were thus initiated between the Department of Energy, British Gas and the regional electricity companies about setting up a joint government/utility Trust to fund energy saving initiatives. The Conservative Manifesto to the 1992 general election contained the pledge that "Together with British Gas and some of the Regional Electricity Companies, we will establish an independent Energy Savings Trust to promote energy efficiency." (Conservative Party, 1992, p.11)

In the Second Year Report on the Environment White Paper, the Government set out in more detail the role envisaged for the Trust. "…it is unlikely that information programmes by themselves will realise the full scope for savings... financial incentives to consumers to improve their energy efficiency provide the way forward." (Cm 2068, 1992, p.53)

However, public expenditure constraints meant that the money would not come from the taxpayer. Instead, the Government viewed the energy utilities as "well placed to deliver such incentives" (Cm 2068, 1992, p.53). The Report contained details of the first three pilot programmes which were expected to cost about £6 million in the first year.

The Trust was established in November 1992. In evidence to the Environment Select Committee, in May 1993, the Government indicated that the Trust could contribute savings of 2-3.5 MtC (at least one quarter of the Government's target as agreed at the Rio Convention on Climate Change). By this time, OFFER too had indicated that it would allow the costs of approved energy efficiency projects to be passed through as part of the revised supply price formula – up to £100 million over four years. The Trust calculated that, to achieve the climate change target, it would need to spend £1.5 billion by 2000 and assumed that the bulk of this money would come from British Gas and the regional electricity companies (RECs).

In the meantime, however, Clare Spottiswoode, the new gas regulator had been appointed and had begun to raise some concerns about the E factor. On 25 January 1994 she made these concerns public at the Trade and Industry Select Committee. Spottiswoode told the Committee that, "The E factor was introduced with a very specific remit, it was to encourage British Gas to look at saving energy where it was economic to do so... [where] it was going to be cheaper than... developing a new North sea gas field... It was not introduced in order to deal with the Government's CO_2 remit... and yet it is being hijacked into that, in my opinion." (HC 185, 1994, para 93)

Spottiswoode's main concern was the "assumption that the regulator would just take on that Government policy and fund it. I have two problems with that. Firstly, it actually requires raising taxes on gas consumers generally and I feel personally uncomfortable about that, because OFGAS is not accountable in that way. Secondly, raising taxes is actually a Parliamentary decision, not a regulatory decision, and I think it wrong that an individual should have the power to raise the kind of monies that they are talking about..." (HC 185, 1994, para 92)

Later in that session and in subsequent sessions with the Environment Committee, Spottiswoode raised concerns about the regressivity of the E factor (as much of the money might go the better off and suggested (and had to withdraw in the light of legal advice) that her predecessor had acted illegally in introducing the E factor. Spottiswoode ended the schemes approved by McKinnon after their pilot phases and rejected all schemes proposed to her. Rather than up to £50 million per annum, as envisaged by her predecessor, less than £2 million in total was spent by the time the formula ended in March 1997.

It was clear, from Counsel's opinion, that Spottiswoode was acting within her powers of discretion, in taking a tougher attitude to use of the E factor than her predecessor. The

electricity regulator, Professor Stephen Littlechild, Director General of OFFER, took a rather different view – approving £100 million under the supply price control, from 1994-98 to establish the energy efficiency standards of performance scheme (EESOP). He too however, did not provide funding on the scale that Ministers had imagined citing his view that to raise more substantial amounts than he had agreed under the supply price control, "would raise issues more appropriately dealt with through general fiscal policy rather than through price control mechanisms proposed by a regulator." (OFFER, 1994, p.33)

However, this does illustrate that McKinnon and Littlechild were willing to use their limited and subsidiary duties relating to environmental protection and promotion of efficient use of electricity and gas to introduce environmentally beneficial measures that would impose some costs on all customers when the benefits (lower energy bills and warmer homes) would accrue only to some customers.

From EESOP to the Energy Efficiency Commitment (EEC)

Since the early days of the E factor and the EESOP scheme the role of the energy suppliers in delivering energy efficiency programmes has become firmly established. Littlechild continued the EESOP scheme on electricity suppliers from 1998-2000. In 2000 Callum McCarthy then re-introduced a similar scheme for gas suppliers and the joint gas and electricity EESOP scheme ran from 2000-2002 to act as a bridge between the old schemes and a proposed new form of obligation for energy suppliers that the Government was considering introducing under the Utilities Act. The Act then paved the way for the establishment of the Energy Efficiency Commitment (EEC), under which all energy suppliers are set energy saving targets that they achieve by establishing various schemes to encourage their customers to install energy efficiency measures such as insulation, low energy lighting and efficient appliances. The current EEC runs from 2002-05 and is set on the basis that suppliers may need to spend up to £3.60 per customer per year to achieve the targets. Discussions are currently taking place about the new EEC to run from 2005 and it is expected that this could result in a doubling of the targets.

Ofgem also has responsibility for implementing the Government's Renewables Obligation, which was also introduced under the Utilities Act and which started in April 2002. The obligation sets a target for electricity suppliers to source at least part of their electricity from renewable generators. This target starts at three per cent in 2002-2003 and reaches 15.4 per cent in 2015.

Ofgem's third role in implementing an environmental initiative established by the Government relates to the Climate Change Levy, which came into effect in April 2001. The levy applies to sales of electricity to the business and public sectors. Renewable and some CHP generators can have their output exempted from the CCL and Ofgem runs this

exemption scheme ensuring that they meet the criteria and issuing them with Levy Exemption Certificates.

Paying for water quality

When the water industry was privatised in 1989 it inherited a legacy of under-investment in sewage treatment and disposal and in water quality. A number of new EC and UK regulations would require this investment to be tackled by the middle of the 1990s. Part of the rationale for privatisation was to enable this investment to be funded not by the taxpayer but by the water consumer and private capital. The initial price limits for the companies were set to enable the companies to finance these obligations – price caps allowed an increase in average water bills of 5% a year over the RPI. During the early 1990s yet further obligations were announced as a result of EC or UK legislation, or action by the then main water quality regulator, the National Rivers Authority (NRA).

In his paper, "The Cost of Quality", issued in August 1992, Ian Byatt raised his concerns about the escalation in water prices and the likely impact by the end of the decade if prices continued to rise at a similar rate. The paper was issued as part of the consultation undertaken in the Periodic Review of water prices, leading up to setting new price limits to come into effect from April 1995. Byatt was particularly concerned about the implications of the EC Urban Waste Water Treatment Directive (UWWTD) "whose costs appear to have escalated dramatically from earlier estimates made in 1990. If the European Community and the Government impose further increases in standards, and the environmental regulators implement those standards in a way which imposes unexpected costs, bills could continue to rise significantly faster than the rate of inflation. Improvements in the quality of drinking water and the water environment are beneficial. But they cost money – which many customers can ill afford." (OFWAT, 1992, p.4)

OFWAT subsequently worked with the NRA, Drinking Water Inspectorate (DWI) and the water companies, based on guidance from the Department of the Environment, to clarify existing and potential legal obligations and thus refine the preliminary costings in "The Cost of Quality". In July 1993, Byatt published a further paper, containing these revised costings, which he called "Paying for Quality: the Political Perspective". In his Foreword, Byatt explained: "My purpose in preparing this report is to seek from the Secretaries of State for the Environment and Wales a clear perspective on new obligations and their implementation, as a basis for setting revised price limits. ...I need clear guidance from them on the new obligations that companies are likely to face and the time scales for achieving them." (OFWAT, 1993, p.4)

Byatt made his views on increases in water charges very clear: "I do not believe that customers – business customers as well as domestic customers – will regard the increases in bills set out in this report as affordable. The challenge for customers, for government,

for regulators, and for the companies which I identified in 'The Cost of Quality' has not gone away. Difficult decisions will be required. I commend this report to the Secretaries of State for the Environment and Wales, and invite their perspective on the issues raised in it." (OFWAT, 1993, p.5)

The response from the Secretaries of State came in October 1993. It set out in some detail the standards which would be likely to drive up investment requirements and hence water charges over the 5-10 years from 1995 (the next price control period) and the Secretaries' of State interpretations of the investments required. The essential message of the Government's response was that "we believe that there will be scope for significantly lower bill increases than those set out in 'Paying for Quality'". (Department of the Environment/Welsh Office, 1993, p.4)

The Government set out its advice to Byatt. Firstly, "In general we think that it will not be necessary for price limits for the period 1995-2000 to anticipate possible future tightening of standards..." Secondly, Byatt was advised to undertake further reappraisal of the investment programmes proposed by the companies to ensure that they were necessary and made use of available efficiency improvements and reductions in costs. Thirdly "there must be a question about whether in the light of new obligations agreed since 1989 it is right to proceed, or to proceed according to the original timetable, with all the discretionary environmental and non-environmental spending which may have been included in those programmes." Thus the Secretaries of State told Byatt that "We believe that pressure on all these fronts will tend to reduce the price increases that would be necessary in the period 1995-2005 while still permitting satisfactory implementation of environmental and safety obligations." (DoE/Welsh Office, 1993, p.8)

Byatt therefore, set much tougher price limits for the water companies when he reviewed them in 1994. Whereas the "K" factors (which specify the amount above or below the RPI that prices can rise or have to fall) set for the 1990-1995 period, ranged from +3 to +10, the "K" factors for 1995-2005, ranged from -2 to +3.5. In his Foreword to the document setting out the new price controls, Byatt reiterated his concerns that improvements in quality should proceed at an affordable rate. He said, "In their paper, 'Water Charges: the Quality Framework', the Secretaries of State recognised this principle and set out their requirements for water quality. Since then they have further defined the obligations to be achieved, especially with respect to the requirements of the EC Urban Waste Water Treatment Directive (UWWTD)." (OFWAT, 1994, p.2)

The development of NETA

Another interesting case study of how a regulator and government deal with sustainable energy issues is the development of the New Electricity Trading Arrangements (NETA).

Since electricity privatisation in 1989, electricity trading was based on an electricity pool in which wholesale electricity prices were set centrally. The pool system had been subject to a number of criticisms, the chief one being that it produced wholesale electricity prices that were higher than necessary. The review process that led to NETA began in October 1997 when the then Minister for Energy invited Offer (as it was at the time) to consider how a review might be undertaken. Offer produced its proposal for terms of reference for the review in March 1998. Offer then produced a first proposals paper on new trading arrangements in July 1998 and these were accepted by the Government in October 1998 in the white paper on energy policy. This white paper was focussed on ways of protecting the market for coal and led to a moratorium on construction of new gas fired power stations as an interim measure until new trading arrangements could be introduced, that, it was hoped, would create a more "level playing field" between gas and coal fired generation. It was agreed that the work on developing detailed proposals would be undertaken jointly by Offer and DTI with participation of the industry and customers.

The objectives of the review as set out by Ofgem (as it had by then been renamed) included a reference to establishing trading arrangements that "are compatible with wider Government policy, including on environmental and social issues". (Ofgem, 1999, p.17). In addition the Government's White Paper identified some issues where further consideration would be needed that included: "appropriate consideration of CHP, renewables generators, small embedded generators" (Ofgem, 1999, p.17) In July 1999 Offer produced detailed proposals for NETA. The paper was upbeat about the prospects for CHP and renewables under NETA suggesting that most such plant would benefit rather than being harmed.

The NETA were introduced in England and Wales in March 2001. Under NETA the majority of electricity is traded through bilateral contracts (between generators and purchasers who are either energy suppliers or large energy users) where prices are agreed between parties and on power exchanges. About 2% of electricity is traded through the NETA balancing mechanism operated by the National Grid Company to ensure system security – for example, where too much or too little electricity might otherwise be traded relative to demand.

Since the introduction of NETA there have been substantial – 30-40% – falls in wholesale prices. The extent to which this was caused by NETA is disputed by some commentators, who cite a number of other factors, including the introduction of full competition in electricity supply and excess generating capacity (e.g. Helm, 2003) Whatever the source of the price falls however, although large users have seen substantial falls in bills, smaller business users and households have seen little if any impact. Generation makes up a smaller portion of these customers' bills (about half) so theoretically they could have fallen by about 15-20%. There have been some other factors that have increased bills such as the EEC and RO but these would at most reduce the total bill fall to 10-15%. Some consumer organisations such as Energywatch have raised concerns that generators or suppliers are

not passing price reductions on to most customers. These concerns have also been picked up by the Public Accounts Committee who found that "wholesale prices have fallen by around 40% since 1998 and reductions for industrial and commercial customers had been consistent with this fall. But domestic reductions have been much smaller and only 1% to 3% since NETA was implemented in 2001." (HC 63, 2003) The Committee Chairman, Edward Leigh, said that "domestic electricity consumers have got a very poor deal from the New Electricity Trading Arrangements."

The PAC asked Ofgem to examine whether companies have been acting anti-competitively in not passing on price reductions to customers and in particular to look at companies' profit margins. However, there have also been very substantial costs of implementing NETA – estimates for whole industry costs go up to £700 million and still rising (Newbery, 2002) – which presumably the industry is passing on to customers and this is easier to do to small rather than large customers as the latter are more inclined to "shop around".

Whilst NETA so far does not seem to have benefited most household customers by very much if at all, it has had a negative effect on renewable and CHP generators, for several reasons. Firstly, the fall in wholesale prices has affected them as it has all generators. Secondly, they have generally suffered greater falls in the prices paid to them because they are considered to be unpredictable forms of generation (wind doesn't always blow and CHP generators vary the amount of electricity they want to sell depending upon on-site demand). Thirdly, many such generators are small in scale and do not have the benefits of being able to balance one generating station against another like the bigger generators can. Renewable generators have been protected from the worst effects of NETA by the introduction of the RO – this raises the value of renewable supply and hence the price they can get for their output. However CHP has been badly hit – power exports from CHP generators have fallen by 61% (Newbery, 2002) and the market for new CHP has virtually halted – there were 90% fewer installations in 2001 than in 2000 (CHPA). NETA is seen, by commentators such as Helm (2003) and Newbery (2002) as largely benefiting large integrated suppliers/generators at the expense of smaller players and new entrants. NETA also seems to be responsible for reducing plant margin (as generators are encouraged to "mothball" unprofitable generation) to levels that the National Grid is becoming concerned about. In terms of a sustainable energy policy then NETA does not look very successful.

NETA was developed as a joint initiative of DTI and Ofgem but, as Dieter Helm (2003) has pointed out, Ofgem has been in the lead as "the complexity of the issues (and the lack of expert resources) closed off much of the necessary scrutiny by the DTI." (Helm, 2003, p.319). This reliance on Ofgem is recognised in DTI. Thus, although the likely impact on CHP, renewables and other small generators was considered at the start of the NETA process, this work was done by Ofgem and painted what must now be regarded as an overly rosy view – in particular it suggested that "consolidators" would emerge in the

market to enable smaller and intermittent generators to pool their output to participate better in the market. In fact this has not happened – an outcome that perhaps might have been expected if more thought had been given to the lack of incentives for such consolidators. Ofgem's preoccupation was what it saw as the potential economic benefits of NETA, with environmental considerations taking a back seat. Whether the Government would have wanted the policy changed if it had been given a more negative assessment of the prospects for CHP and renewables is debatable – given the other benefits that were expected of NETA it may well have decided that these should prevail over environmental considerations. However, the key point here is that there was no one to challenge the Ofgem view, other than the disparate voices of the CHP and renewables industry.

The approach to social objectives

The above examples illustrate some of the issues that the regulators have had to deal with. They show that the greatest tension exists between environmental objectives on the one hand and the social and economic ones on the other hand. The main reason why Ofwat was reluctant to fund environmental objectives at the level originally envisaged was concerns about affordability for households and businesses. Offer and Ofgas raised concerns about the principle of regulators imposing costs on customers that should be subject to political rather than regulatory decisions. However, the social concerns were about the impact on all customers. Where it comes to dealing with issues affecting some customers – notably those on low incomes or otherwise disadvantaged – the regulators have often found it less easy to reconcile social and economic objectives.

In the pursuit of economic efficiency, for example, Offer and Ofgas and now Ofgem, have encouraged energy companies to unbundle costs and unwind cross subsidies, particularly as competition has been developed in energy supply. Customers perceived as high cost – such as those who pay their energy bills via a pre-payment meter or in cash on a weekly basis – have to pay more than those perceived as low cost, such as people who pay their bills by direct debit. Measures to tackle and prevent debt or to provide special help to those with special needs such as some disabled customers, are also costly and raise the question of whether they should be paid for by all customers or just those who require these services.

Although Offer and Ofgas did take a number of initiatives specifically to assist disadvantaged and low income customers (for example: requiring companies to offer free gas safety checks for elderly and disabled people; requiring codes of practice on handling customers in debt), consumer groups and charities frequently criticised both regulators for taking too little action to meet social objectives. In response to growing concerns about the extent to which disadvantaged customers were sharing the benefits of energy supply competition, the Government in 1998 asked the regulators to produce a social action plan

to "ensure efficiency, choice and fairness in the provision of gas and electricity to disadvantaged consumers." (DTI,1998, p.36) The Government also said that it would consider the case for further legislation to help disadvantaged consumers in the light of the action plan.

The then regulators, Clare Spottiswoode and Stephen Littlechild produced a plan in June 1998, which was highly criticised as inadequate for failing to address the issues in a serious manner. When Callum McCarthy took over as gas and electricity regulator at the end of 1998, one of his first announcements was his intention to produce a new social action plan. Following extensive discussions with suppliers and consumer groups the plan was published in March 2000. This set out the contribution that Ofgem believed it could make to tackling fuel poverty. As a result licence conditions dealing with payment terms, prepayment meters, customers in debt, energy efficiency advice and special services to the elderly and disabled have been revised. Ofgem has also worked with energy suppliers on a number of projects aimed at developing better debt management and prevention.

A particular concern has been the higher prices faced by customers who use prepayment meters (1.5 million gas and 4 million electricity customers). Although many low-income consumers do not use these meters and some people who do use them are not poor, the vast majority of prepayment meter users are low-income households. In response to concerns over the higher charges Ofgem decided, in October 1999, to limit the maximum prepayment meter surcharge to £15 per year – in effect meaning that any costs over and above this would be smeared across the customer base rather than falling just on prepayment meter users. In Ofgem's view this was as far as it could go to balance this social objective with the one of economic efficiency via cost reflective charging. It also pointed out that even if the social objective was paramount this would not necessarily lead to a decision to spread more of the costs over the whole customer base given that many low income customers do not use prepayment meters.

What was particularly interesting here was the way in which regulators approached social issues with what could be regarded as very limited duties to take much action. Stephen Littlechild, for example, interpreted the duties relating to disabled and elderly customers to cover a broader group (including those on low incomes) in setting companies targets to reach disadvantaged households when delivering the energy efficiency standards of performance scheme. James McKinnon similarly interpreted his duties when establishing the E factor scheme. Callum McCarthy went further than this in developing the social action plan "to tackle fuel poverty".

To date there has not been anything comparable to the Government's fuel poverty strategy to address water affordability issues. Neither has there been any initiative by the Government to encourage Ofwat to take on board the social agenda. To a considerable extent this can be explained by important differences in social issues between water and energy. Firstly water customers cannot be disconnected for non-payment and neither do

they have pre-payment meters so they cannot "self-disconnect". Both were outlawed in the 1999 Water Industry Act. In energy by contrast disconnection is still allowed although it is much less commonly used than in the past due to the widespread deployment of pre-payment meters for households who have payment difficulties or who have been in debt. Secondly, most people still pay a fixed annual charge for water rather than charges varying by use and so uncertainty about bill size and rationing is also not an issue (although these issues can arise for some households with water meters, many of them have installed meters because they are low users and can actually reduce their bills). Energy consumers who have pre-payment meters but cannot afford to "feed" them as much as they need to face the problem of "self disconnection". Thirdly, only a few water companies give discounts for payment by direct debit and the discounts are small (£2-5 per year) compared to those available to energy consumers who choose this method. Energy customers can save £20-30 by choosing monthly direct debit instead of paying quarterly. Prepayment customers tend to pay even more than those who pay quarterly. Fourthly, energy takes a much higher proportion of household income than water and households who live in energy inefficient property (more likely amongst those on low incomes) have to spend more to keep warm or live in colder conditions than they would wish.

There is therefore something of a feeling in DEFRA, Ofwat and Water Voice that social issues are less pressing or have been dealt with. However, the growing incidence of debt nis becoming a major issue, although the main concern of Ofwat and Water Voice to date seems to be the burden that this places on all customers, rather than the problems faced by those who cannot pay. However, concerns about the adequacy of debt management procedures of different water companies and the need to deal with the problem of those who can't afford to pay their bills (some companies have set up charitable trusts to help pay water debts) mean that affordability issues will need to be addressed in the coming years.

Section 2: Taking regulation into the 21st century

This section considers the development of the two key pieces of legislation (the Utilities Act 2000 and Water Act 2003) and some of the work being done in Ofgem to implement the changes brought about by the Utilities Act. It is too early yet to undertake a similar review of the impact of the Water Act on Ofwat, although some points on this are raised at the end of the Water Act section.

The Utilities Act

The Labour Government, elected in 1997, signaled its intention to review utility regulation and in early 1998 published a consultation paper (DTI, 1998) setting out proposals for change. The primary motivation was concern that the price limits set for many of the utilities had been too generous to shareholders at the expense of customers. However, there were also concerns about accountability of the regulators and the need for a framework that made clear the respective responsibilities of the regulators and government. The third area of concern was that social and environmental considerations were not being adequately addressed. In particular, the new government was concerned that the benefits of competition in energy supply might be going more to the better off than to low income consumers.

The outcome of the review of regulation was the Utilities Act 2000, which, in the end, dealt only with energy regulation, leaving changes to communications and water regulation to other Bills – in the case of water, the Water Act 2003 (see below). The Utilities Bill abolished Offer and Ofgas and created Ofgem and introduced a new primary duty "to protect the interests of consumers… Wherever appropriate by promoting effective competition". It also introduced a specific duty to "have regard to the interests of individuals with low incomes" alongside maintaining the similar duty towards the elderly and disabled and those in rural areas that had existed in the previous legislation governing Offer and Ofgas.

In the Lord stages of the Utilities Bill, Lord Ezra (the Liberal Democrat peer and former coal board Chairman) and a number other Lords sought to move an amendment that would have inserted a reference to sustainable development. The amendment would have meant that the primary duty to protect the interests of consumers would have had the words "in the context of sustainable development" inserted into it. Lord Ezra referred to the Government's own wording in its draft social and environmental guidance to Ofgem

which said that "The Government intends that the regulatory system should make an appropriate contribution towards achieving sustainable development." (Hansard, 2000)

Responding for the Government, Lord McIntosh of Haringey said that "the Bill is not an energy policy Bill; it is a utilities Bill. It deals with economic regulation… It is right that the authority's general duties should have an economic focus generally concerned with price and quality of service to consumers… However, we recognise that the way in which the authority exercises its functions can have significant consequences for the environment and for society as a whole. The authority should weigh such considerations properly in the balance" These matters were, according to the Minister dealt with in the Bill in the provisions for the Secretary of State to issue guidance to the authority on social and environmental matters and subsidiary duties to "have regard" to the interests of certain groups of customers (low income, elderly, disabled, in rural areas) and the effects on the environment. The Bill also made clear that the definition of consumers included future consumers.

"However, it would be wrong for the general duties of an economic regulator to be amended in the way that the amendments propose. The concept of sustainable development incorporates social and environmental as well as economic considerations. If we incorporate the social and environmental considerations into the principal objective, we remove the priority afforded to the interests of consumers. That is contrary to the principal purpose of regulations as set out in the Bill. It would leave the authority uncertain as to how it should respond if pressed to take measures which, in the interests of the environment, are neither in the long nor the short-term interests of consumers."

"However, other matters in the social and environmental field should be decided by the Government and implemented through specific legal provision, not necessarily in the course of this Bill. They fall outside the scope of economic regulation. Examples of government action as opposed to authority action include the climate change levy… the pensioners' winter fuel payments…"

In the face of this opposition Lord Ezra agreed to withdraw his amendment and consider whether any other amendments might be pursued. In closing he commented "I should have thought that as the Government feel so strongly about sustainable development they would have welcomed the opportunity to put it in the Bill."

Responding on 5 July 2000 to an amendment proposed by Lord Ezra to strengthen the provisions on energy efficiency, Lord McIntosh said that in the event of a conflict between energy efficiency and the interests of consumers, then the interests of consumers should prevail. However, he added "the interests of consumers include the interests of future consumers. Measures to promote energy efficiency are in the longer-term interests of consumers as they result in decreased energy consumption and consequently, lower monthly bills. For that reason, it seems unlikely that a measure to promote energy

efficiency could ever be resisted on the ground that it conflicted with the duty to further the principal objective." (Hansard, 2000)

McIntosh said that the reference to future consumers was included because "the Government want sustainable development to be a serious consideration in the protection of consumers". This, he said, would enable not just energy efficiency but also renewable energy sources to be promoted.

The duty to secure a diverse and viable long-term energy supply was added to the Act, in the face of Government resistance, due to an amendment proposed by Lord Jenkin of Roding (Patrick Jenkin, a former Conservative Energy Minister) and supported by Lord Ezra. In pressing the amendment both peers emphasised the need for Ofgem to have duties to protect security of energy supply. Lord Ezra, said that nuclear power was beginning to be phased out and that while gas supply is at present plentiful, "in due course we shall have to depend on supplies from more distant places which are not entirely reliable." Ezra also said there was a need to consider the role of clean coal technology. Other peers spoke in support of the amendment in strengthening consideration of the role of renewables. In practice, it is unclear what the duty will actually require Ofgem to do.

Thus the Government's view is that, although sustainable development should be a consideration for Ofgem, where conflicts arise the interests of consumers (present and future) – which will primarily be a consideration of how much they should pay – should prevail. This suggests a distinction between the interests of people as citizens (in which sustainable development as a whole will be the goal) and their interests as consumers, where energy prices are the main concern. Rather than place a duty in the Act therefore, the Act specified that the Government would issue social and environmental guidance to Ofgem. The regulator is required to "have regard" to such guidance but it is in no sense a means of the Government requiring the regulator to take any particular action. Draft guidance was published whilst the Bill was going through Parliament.

In November 2002, the Secretary of State issued Social and Environmental Guidance to Ofgem for the first time. Ofgem was asked to have regard to the UK's Climate Change Programme and Sustainable Development Programme in its policy-making process. The Guidance was revised in the light of the White Paper and re-issued in February 2004. The revised guidance is considerable shorter and more "high level" than the first document which went into rather more detail about the matters that the Government wished Ofgem to consider. The revised version mainly focuses on the role of Ofgem in contributing to the targets set out in the Energy White Paper – on carbon reductions, renewable energy and CHP – and in contributing to the targets set out in the Fuel Poverty Strategy. It reiterates a previous commitment that "where the Government wishes to implement specific social or environmental measures which would have significant financial implications for consumers or for the regulated companies, these will be implemented by

Ministers, rather than the Authority, by means of specific primary or secondary legislation. The Government does not seek to do this through this Guidance." (DTI, 2004)

The Guidance states that the Government expects Ofgem "to demonstrate, through annual progress reports, how it has helped the Government make progress towards the targets and aims set out in this Guidance". In his introduction the Minister also say that if Ofgem "foresees any actual or potential difficulties in reconciling the energy policy goals and targets set out in this Guidance with their own regulatory responsibilities then the Government encourages the Authority (Ofgem) to seek early dialogue on these issues." (DTI, 2004)

The Energy White Paper

In addition to the Utilities Act, energy policy is now set in the framework of the Energy White Paper, published in February 2003, which is the outcome of a review begun in 2001. The White Paper has, for the first time, put sustainability at the heart of energy policy, stressing in particular the need to tackle climate change.

The Energy White Paper sets out "four goals for our energy policy:

- to put ourselves on a path to cut the UK's carbon dioxide emissions – the main contributor to global warming – by some 60% by about 2050, as recommended by the RCEP, with real progress by 2020;
- to maintain the reliability of energy supplies;
- to promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and to improve our productivity;
- to ensure that every home is adequately and affordably heated." (DTI, 2002)

How Ofgem is now integrating social, economic and environmental aspects of sustainable development

Ofgem published its Environmental Action Plan in 2001, It set out Ofgem's role and responsibilities in relation to the environment within the limits of its statutory duties.

The following extracts from the most recent report on the EAP (Ofgem, 2003) set out Ofgem's general position.

"Ofgem's principal objective is to protect the interests of consumers, including future consumers, wherever appropriate by promoting effective competition. Secondary duties

require Ofgem to take account of the effects of its policies on certain disadvantaged consumer groups and on the environment. The combination of these duties provides Ofgem with a framework for promoting a sustainable energy policy, comprising as it does a balance of economic, social and environmental duties."

"Ofgem is committed to working with Government to meet the challenge of achieving a low carbon economy, at least cost to consumers. Ofgem contributes to this by seeking to minimise any negative environmental impacts associated with its policies, while promoting policies where there is synergy between its economic, social and environmental objectives."

Another interesting quote is also taken from the 2003 EAP report. "Ofgem took part in the White Paper process, including submitting a response to the Government's consultation document. It recommended that a broad economic instrument would be likely to achieve CO_2 reductions at lower cost to consumers than a series of different instruments with widely varying costs per tonne of avoided emissions. In line with this, Ofgem urged the Government to support the European Union's proposal for a compulsory greenhouse gas trading scheme, and to rely on emissions trading more widely in order to deliver environmental improvement at least cost to consumers."

As part of this work Ofgem carried out and submitted to Government analytical work on the cost to customers of saving a tonne of CO2 under a number of different schemes. This shows Ofgem's role in the policy process and in advising government on policy options. To unpack this quote what it means is that Ofgem would prefer the Government to replace the existing mix of measures such as the EEC and renewable obligation with a single instrument focussed on reducing carbon emissions that would enable energy companies and others to choose how to achieve those savings at least cost. For example, if companies thought that energy efficiency would be more cost effective than renewables (or vice versa) then they should be able to make this choice rather than being set specific targets for each. So far the Government has not followed this advice from Ofgem but it may well do so eventually. This is a good example of a regulator contributing useful policy advice based on its expertise. It is then for the Government to decide whether or not to follow it. Ofgem is not therefore just an implementer of policy nor just making decisions on what it should do – it is a key actor in the energy policy network.

Ofgem has made a commitment to produce Regulatory Impact Assessments that will in future include environmental and social impact assessments for all significant new policies (e.g. price controls). This became a legislative requirement when the Sustainable Energy Act became law at the end of 2003.

Current areas of work for Ofgem include distribution and transmission losses; examining, in the forthcoming new distribution price control, in what ways the distribution system might need to be re-configured to cope with more distributed generation (renewables and

CHP connected to the distribution rather than transmission system) and what impact this might have on costs.

How the new distribution price control will treat distributed generation will provide an interesting example of the extent to which Ofgem's new duties, the social and environmental guidance and the requirement to produce environmental impact assessments of policies will make a difference. Views differ on the extent to which reconfiguring the distribution system to accommodate distributed generation will increase capital and/or operating costs for network operators over the next price control period and beyond. Some commentators believe that such a system could be less costly over the medium to long term (e.g. Mitchell, 2000). However, what is clear is that if the DTI were to have any questions about Ofgem's proposals it has no obvious source of advice other than that provided by Ofgem.

The Water Act 2003

The Act makes the duty to protect the interests of consumers central for the Regulatory Authority. As in the Utilities Act, consumers includes future as well as existing consumers; low income consumers are also specifically mentioned. The Act will establish Ofwat as a regulatory authority like Ofgem abolishing the post of Director General and instead setting up a board with a Chairman, Chief Executive and several non-executive directors.

Subject to the requirement to protect the interests of consumers and ensure that companies can finance their activities(including securing reasonable returns on their capital), the Authority is required to exercise and perform its powers and duties in the way it considers is best calculated "to contribute to the achievement of sustainable development." The Regulatory Authority must also take account of guidance on social and environmental matters issued by the Secretary of State or the National Assembly.

The changes brought about by the Act will not be implemented until 2005, to allow the periodic review process to be completed under the existing legislation. DEFRA has not yet begun the task of drafting social and environmental guidance for Ofwat.

Ofwat however has had a substantial number of detailed environmental duties ever since the first Water Act in 1989. What was lacking in the first Act was any reference to social duties – this was amended in the 1999 Water Industry Act when a duty to take into account the interests of elderly and disabled customers was inserted.

In 2000 the Environmental Audit Committee criticised Ofwat's environmental record. "Ofwat [should] seek to ensure that its own statements do not 'demonise' environmental and quality investment by portraying it as the key upward pressure on prices without equally emphasising the customer and public benefits which it delivers." (HC 597, 2000)

The Committee recommended that "The Director General of Ofwat should be directly accountable for ensuring that Ofwat makes a positive contribution to the Government's sustainability agenda". Ofwat said in its memorandum to the Committee that it believed that a sustainable development duty better rests with Government rather than the economic regulator and that Government could further the cause of sustainable development through the use of economic instruments for pollution control. Ofwat's view was that it contributes to, but is not the main party responsible for, promoting sustainable development. In questioning by the Committee, Sir Ian Byatt said "I think that because of the record the actions are already there and it may not be necessary to encapsulate them in legislation. Legislation is a very scarce commodity. I do not feel that things would be radically different if it were to be in legislation. It is up to Parliament." (HC 597, 2000)

Philip Fletcher was appointed Director General in August 2000. In its response to the Committee's report, in January 2001, Ofwat said "A provision for Ministers to issue social and environmental guidance which Ofwat must have regard to is set out in the draft Water Bill. This combined with Ofwat's duties under section 3 and 4 of the Water Industry Act 1991 would allow Ofwat, and the companies, to continue to make an appropriate contribution to the attainment of sustainable development without the necessity for an additional duty." (OFWAT, 2001) However, between publication of the draft water bill in autumn 2000 and the actual Bill in February 2003 a change of view had come about as the Bill did contain a specific duty and Philip Fletcher has said "we support this move." (Fletcher, 2003)

To some extent the insertion of the sustainable development duty is viewed as mainly symbolic by many both within the various agencies and outsiders. Given the subsidiary nature of the duty (to the duty to protect customer interests and enable companies to finance themselves), the economic concerns remain the paramount ones. Nevertheless the duty has been welcomed by all the main stakeholders for clarifying that Ofwat does need to take social and environmental issues as well as economic ones into account. One specific area where it is thought that the duty may be useful is in encouraging Ofwat to look rather more widely at how environmental and social objectives are to be met – is this best done through price setting for water companies or would action be better taken elsewhere?

Section 3: Some key issues

The examples cited in section one suggest that the three aspects of sustainability – economic, social and environmental – have not been fully integrated into the regulation of the energy and water industries to date. Economic concerns have been paramount for the economic regulators and the roles of others who might be expected to champion the social and environmental aspects have been unclear or confused and their performance variable in quality. The issues that have arisen have raised questions about the appropriate roles for economic and quality regulators and government departments. In some cases, as we have seen, the issues have been resolved by government taking on responsibilities that are felt more properly to lie with elected governments than to be left to the discretion of appointed regulators. However, this then raises a question about the expertise and resources in government to take on these roles. Furthermore, many issues remain within the control of the regulators, hence the insertion of more duties and powers into the Utilities Act 2000 and Water Act 2003 to reflect the social and environmental agenda alongside the economic. How far has the situation been resolved and is sustainability now likely to be more effectively integrated into regulation of energy and water ? Some key questions need to be addressed. These include:

- who decides – regulators or governments?
- do economic regulators need a sustainability duty?
- what should be the respective roles of departments and regulators?

Who decides – regulators or governments?

In a system of independent regulators with considerable discretion about how to balance a range of duties, the extent to which social, environmental or economic considerations are paramount in their decisions is up to the regulator. In such a system, where the government is seeking specific outcomes that the regulator's actions can affect, it is therefore to a large extent "relying on a regime where the regulator is sympathetic" to those outcomes, as one official interviewed during this research put it. Callum McCarthy in his time at Ofgem could be considered to have pushed the boundaries of what he could do on social issues to contribute to the government agenda there – he certainly did more than his predecessors even before his duties and powers were changed. Compared to her predecessor and her successor, Clare Spottiswoode was considerably less sympathetic to allowing energy efficiency programme costs to be charged to customers.

Both the energy efficiency and water price control case studies in Section one show that governments have had to intervene in cases where environmental objectives would impose costs on customers. Both cases illustrate the development of an approach that is

now firmly established, in which government intervenes specifically to set the level of certain environmental obligations rather than relying on the regulators to determine them.

Thus, as we have seen, Ofgem's role in the EEC has now become one of implementation and administration of a legislation based scheme determined by government. By contrast, the original E factor and EESOP schemes were initiated and devised by Ofgas and Offer, who had to decide whether such schemes would be consistent with their duties and powers. The policy role is thus now firmly with government (DEFRA) albeit that Ofgem is involved (as are other organisations such as the Energy Saving Trust) in advising DEFRA on how the scheme should operate. Ofgem's role in the RO and CCL exemption is also one of implementation and administration of government policy decisions (though here too Ofgem is involved in advising on how the schemes should operate).

In the water example the process that is now firmly established, of guidance from the Secretary of State on environmental obligations, originated from the then regulator's concern, in the early 1990s, about the scale and costs of environmental improvements. The system that has evolved, of advice from Ofwat and the quality regulators to DEFRA and then guidance, taking into account these sources of advice, from the Secretary of State to the regulator seems to be working reasonably well although not without perhaps inevitable disagreements along the way. In this case, the split of responsibility has become that the Government is effectively deciding the level of environmental obligations that need to be met, whilst Ofwat decides how much revenue the water companies will require to meet these obligations.

These examples illustrate the conflicts that can and do occur between environmental, economic and social goals and the problems that can occur if economic regulators are expected to exercise wide discretion in the face of such conflicts. Clarity about where decisions are for the regulator and where they are for government will make the process operate more transparently and accountably, although it will not end the scope for conflicts and disputes and the need for often difficult political decisions.

Do economic regulators need a sustainability duty?

The Utilities Act 2000 and Water Act 2003 place more duties on Ofgem and Ofwat in terms of the sustainable development agenda but important differences remain – notably the Government's rejection of a sustainable development duty for Ofgem. At first sight a duty looks likely to be more effective in terms of getting regulators to take the issue seriously. However, a number of factors make this debatable. Firstly, unless contributing to sustainable development is made the primary duty or part of it, regulatory discretion combined with a subsidiary duty means continued dependence upon "a regime where the regulator is sympathetic". Secondly, even if sustainable development were made the primary duty, the very nature of the concept means that a balance has to be struck

between social, economic and environmental considerations: it is not always possible to satisfy all three equally. We are therefore back to the exercise of regulatory discretion in achieving the balance. Thirdly, making sustainable development the primary duty of the economic regulator would broaden the role considerably – in effect the regulator could end up taking broad energy or water policy decisions that are more properly the job of government.

If a primary sustainable development duty is inappropriate, is a subsidiary duty worth having at all given the existence of regulatory discretion? On balance, it probably is. It is difficult to see what harm it would do and it would probably do some good for several reasons. Firstly, there is the "legal comfort" factor. Regulators are creatures of statute so such a duty could allow a "sympathetic regulator" to give more consideration to sustainable development issues than he/she would feel able to do and remain within her/his legal framework, without such a duty. Secondly, now that we have moved away from single regulators to boards, a duty would provide a clearer locus for non-executives to raise the issue and expect to see it considered in rather more detail than would be the case in the absence of a duty.

Thirdly, a duty would enable others (notably parliament) to make the regulator accountable over how they have taken account of sustainable development. There would be a greater expectation that regulators would explain how they have taken the issue into account and to spell out where the different elements – economic, social and environmental – raised conflicts. As we have seen, conflicts have and will continue to occur. Where meeting environmental goals (for example) would seriously compromise economic goals (for example), regulators should make this explicit, giving the government the opportunity to decide how to proceed. To date this has happened in some of the examples given in this report, but on an ad hoc basis. A duty would make this an expectation. It would provide regulators with a clear framework to highlight areas where achieving the three aspects of sustainable development would be difficult and hence where the government should act.

A sustainable development duty would thus particularly assist the transparency and accountability of the decision making processes in the regulator. Given that a duty has now been given to Ofwat it seems anomalous that one doesn't exist for Ofgem.

Recommendation: A sustainable development duty should be inserted into Ofgem's duties when the opportunity of legislation next arises, given that this has now been done for Ofwat.

Issuing guidance on social and environmental issues without a sustainable development duty will be of limited value as it will have no legal basis and regulators are guided by their powers and duties. However, as a supplement to a sustainable development duty guidance will provide an opportunity for the government to flesh out the social and environmental

issues that need to be considered by the regulator – it is reasonable to assume that the regulator does not need guidance on the economic issues!

What should be the respective roles of departments and regulators?

There are some areas of similarity but also some important differences between energy and water in terms of the roles of departments and regulators. A general point is that the regulators are large and well-resourced and run systems that are highly complex requiring very specialist knowledge. Organisations with these characteristics exercise considerable influence and power in policy networks. Perhaps a comparable earlier example was the position of the Central Electricity Generating Board (CEGB) prior to electricity privatisation and its key role in energy policy particularly in relation to the small Department of Energy. How can governments make effective use of such agencies and remain in control of the policy process? The rather different issues in energy and water are considered separately in the next two sections, followed by a final section on some common issues.

Issues in energy

There are important differences between energy and water in terms of how major decisions are reached on key issues such as levels of investment required to meet environmental objectives. Firstly there is a greater role for other agencies in Ofwat's main task – price setting – than exist for Ofgem. There are no equivalent bodies to the EA, DWI and English Nature in the energy field. There are two semi-independent agencies that are funded to promote energy efficiency and renewables – the Energy Saving Trust and Carbon Trust but they are largely focussed on programme implementation, have limited resources for policy related work and no expertise or locus in the key areas dealt with by Ofgem. Secondly, whilst one department has the policy role for water – DEFRA – the energy policy function is split between DTI and DEFRA. The former has most contact with Ofgem and takes the lead on renewables and distributed generation but DEFRA has responsibility for energy efficiency and CHP. Fuel poverty issues are dealt with by both DEFRA and DTI. Finally, in the big decisions on environmental objectives Ministers have a key role in water – issuing guidance based on advice from Ofwat, EA, the DWI and English Nature – but no similar role in energy.

The Energy White Paper has established a Sustainable Energy Policy Network of officials in various government departments with responsibilities for aspects of energy policy (in addition to DTI and DEFRA others with important roles are ODPM and DWP) to try to improve the policy process at departmental level. The Government has also appointed a Sustainable Energy Policy Advisory Board of outsiders to provide advice. But the idea of

merging the key energy functions in DEFRA and DTI, that was raised during the energy review process, was dropped. It seems unlikely that these initiatives will have much impact. Networks of officials (and ministers) have been established many times before to promote matters such as energy efficiency and their record is not encouraging. After an initial flurry of activity they have usually faded quietly away after two-three years with little to show for their efforts. Busy officials whose main responsibility is not energy cannot devote enough time to initiatives like SEPN. No matter how good are the advisors on bodies such as SEPAB they too have limited time and are not centrally linked into the day to day policy development process that goes on between DTI and Ofgem – their advice therefore is too easily sidelined. There is thus a real question over whether the government has in place an adequate institutional framework for implementing the sustainable energy policy set out in the White Paper.

For example, a crunch point could occur as Ofgem sets distribution and transmission price controls to accommodate changes to those systems that may be required to accommodate more distributed generation (CHP and renewables), as envisioned in the White Paper. If Ofgem were to decide that the amount of investment in distribution and transmission required were too great a cost for customers to bear, we may see the new Chairman of Ofgem, Sir John Mogg, issuing a similar challenge to Ministers to that issued by Ian Byatt over water prices in the mid-1990s. However, in the absence of an equivalent body to the Environment Agency it is unclear where Ministers could turn to for further advice on this matter. Nor is it clear what role Ministers would be able to have in the process of determining objectives and targets.

Dieter Helm (2004) has suggested that an Energy Agency should be created that would bring together the functions of Ofgem, the EST and the Carbon Trust as well as some functions of the DTI and DEFRA. The new agency would deliver the broad policy objectives of the Energy White Paper. This is an attractive proposal in many respects although it would need to be clear from the remit and objectives given to the agency that this is not simply Ofgem with an expanded role. The EST and Carbon Trust are largely delivery rather than policy development organisations and so the critical mass of policy makers could remain dominated by economic regulation. Transforming an organisation that has developed as an economic regulator over many years, recruited and trained staff to deliver this would be an enormous task. A variation would be to keep Ofgem focussed on economic regulation (albeit whilst being required to take account of the broader sustainability agenda), but to establish an energy agency to deal with the broader remit of the White Paper – perhaps incorporating the EST and the Carbon Trust and the key functions related to climate change commitments, security of supply and tackling fuel poverty. Such an agency could, like the EA in water, be given a role in Ofgem's key price control tasks and provide an alternative source of advice to the relevant government department.

An alternative to establishing a new agency of this sort would be to give certain functions to an existing organisation. As far as the environmental issue are concerned, for example, it is possible to envisage the Environment Agency being given a greater role in the energy field. The EA already has a role in relation to sulphur emissions from power generation and so to that extent already has working relationships with Ofgem. So to extend this role and build on its role in water, for example, the EA could be involved in the debate about re-configuring the transmission and distribution networks to accommodate distributed generation. Clearly it would need additional staff and expertise to take this on. However, the energy security questions would fit less well with the EA's role and remit. Fuel poverty questions would also fit less well into the EA. There is also the question of whether giving an already large organisation more functions would be less effective than establishing a smaller organisation with more focus on the energy policy task. These various options would merit further consideration and debate.

Recommendation: The Government should seriously consider either establishing a sustainable energy agency or giving an existing organisation, such as the Environment Agency, the power and duty to take part in key regulatory tasks such as price controls for electricity transmission and distribution and gas transportation to ensure that environmental, social and economic considerations are balanced. As a way forward it is recommended that an appropriate body – such as the Environmental Audit Committee and/or the Sustainable Development Commission – should examine the institutional arrangements for delivering the Energy White Paper objectives.

Whether or not the government decides to establish a sustainable energy agency the continuing split of the main energy policy functions between DTI and DEFRA causes a number of problems. Departmental in-fighting, issues getting lost and lack of critical mass by having officials split between two departments are key issues. The problems that have resulted from NETA illustrate the dangers of having limited resources and expertise within the department. Although NETA was ostensibly a joint DTI and Ofgem project it was clearly Ofgem that was in the lead with few if any people in DTI having enough detailed understanding of the project. There are arguments both for and against bringing the two departments together and it is not the purpose of this report to consider them in any detail. However, in the absence of a sustainable energy agency, or at least some functions being given to a body such as the Environment Agency, the continued split of functions between DEFRA and DTI will make the development of a sustainable energy policy all the more difficult to achieve.

Issues in water

In water however, there are, in addition to DEFRA, Ofwat and Water Voice (the consumer body) two quality regulators who have important roles – the Environment Agency and Drinking Water Inspectorate. English Nature also has a role in some cases.

Although relations between Ofwat and the DWI have been relatively smooth, considerable tensions have developed between Ofwat and Water Voice on one side and the Environment Agency and (to some extent) English Nature on the other side. Essentially the Environment Agency is seen by Ofwat and Water Voice as advocating environmental protection with not enough regard for cost and without doing proper cost benefit analysis. Ofwat and Water Voice are seen by the Environment Agency as opposing environmental protection schemes that would involve anything more than minor costs to customers. DEFRA tends to be caught somewhat in the middle. One interviewee described the price setting process as a "gladiatorial battle".

The following quotes illustrate some of the tensions. From Maurice Terry, Chairman of Water Voice: "We are as yet, far from convinced that the majority of schemes proposed by the Environment Agency and English Nature would pass any robust cost-benefit analysis." (Terry, 2003, p.106) From Barbara Young, Chief Executive of the Environment Agency: "We, with our colleagues at English Nature and CCW, have a responsibility to ensure that environmental issues are adequately considered in the periodic review process. …it is our job to disagree and argue when we believe the environment is at significant risk because of the position of others." (Young, 2003, p.55-6) Young's view is that financial and affordability issues are "predominantly the role of other parties in the periodic review process", although the EA does consider the issues to some extent whilst remaining focussed on the environmental concerns. (Young, 2003, p.56) The Environment Agency has a specific duty to promote sustainable development.

From the interviews conducted as part of this review it was clear that relations between the various agencies have improved somewhat and that Ofwat and the EA have been working together more closely in the current periodic review process to assess the costs and benefits of various schemes. However, the tensions clearly remain and the stereotypical perceptions that the various bodies have of each other do not seem to be changing very much. Another point raised was a lack of clarity in the relationship between the EA and DEFRA, particularly how far the EA should have a policy setting as opposed to pure implementation role. The key role of DEFRA (and Ministers) in deciding the overall size of the environmental programme is now well established and it is right that such major public policy decisions should be taken at this level – they are political choices. This must apply equally where policies flow directly from national decision making and from policies agreed at the EU level – where it is, after all, Ministers who sign up to them. However, many of those interviewed felt that DEFRA is under-resourced and under-skilled and that it therefore relies heavily on the advice from the EA. Another problem cited was too frequent turnover of DEFRA staff at key policy making levels. It would be pointless for the government to fund the EA to provide technical advice and then staff itself up to duplicate the work, but it needs to be an informed and intelligent customer able to ask appropriate questions of its advisers (whether in the EA, Ofwat or anywhere else).

It is perhaps not surprising that Ofgem has paid more attention to social issues than Ofwat and also that social issues in energy are higher up the government department agenda. However, levels of water debt are increasing and two water companies have established charitable trusts to assist customers in hardship. The Government also introduced the vulnerable groups' regulations to assist some households with high water bills. The outcome of the current periodic review will also mean rises in bills that could exacerbate the problems of hardship and debt.

Organisations outside government and Ofwat have started talking about water poverty as an issue that needs to be addressed in similar ways to fuel poverty. Capability to tackle this needs to rise – one possibility is that it could become an important work strand for the new water consumer body, but Ofwat will also need to review how it handles the issue. The DEFRA water directorate also needs to improve its resources to address the water affordability agenda as it affects low income and other disadvantaged consumers – it could usefully learn from action taken elsewhere in the department on fuel poverty. For example, if we are eventually to see wider use of water metering, then more consideration will need to be given to promoting water efficiency measures to protect low income households from the risk of high bills. Experience in developing energy efficiency schemes to tackle fuel poverty will be useful here. Debt levels vary widely between companies and Water Voice has found that companies have scope to improve their debt management. (DEFRA, 2004). There may be some useful lessons from work done by Ofgem on debt management by energy companies. It is therefore welcome that the Secretary of State, in publishing her principal guidance on the water periodic review in March 2004, said that the Government will undertake a review of the ways in which lower income households are helped with their water and sewerage charges.

Recommendation: DEFRA needs to give greater attention to the social part of the sustainability agenda, to ensure that low income and other disadvantaged households are adequately protected, in the face of rising water bills. DEFRA also needs to consider how Ofwat and the new water consumer body should contribute. The proposed review of water affordability for low income households should provide an opportunity to do this. Lessons should be learnt from the ways in which DEFRA, DTI and Ofgem are tackling fuel poverty.

Another gap identified by some interviewees is looking beyond the water pricing regime to achieve sustainable water solutions- attention is focussed on the price review processes that other issues tend to take a back seat. For example getting farmers or industry to act differently so that water pollution can be avoided rather than just focussing on how much to allow in water price controls to tackle pollution. Ofwat's new sustainable development duty might encourage it to consider such approaches rather more. Ofwat, DEFRA and the EA could all have a role here and should work together on solutions.

Energy and water

Although it seems to have been identified as more of a problem in water in recent times, there is a general need in government departments to avoid excessive turnover of staff. Clearly staff do need to move around for career development and new blood is desirable within sections from time to time, but very frequent changes, particularly of several key staff in a directorate or division in close succession ought to be minimised. A particular problem is loss of continuity and focus when key staff move during crucial projects – for example during price reviews.

Another issue raised is the need for greater expertise in departments if they are to be informed consumers of advice from agencies such as Ofwat, Ofgem and the Environment Agency. Solutions to this include: appointing at least some staff in a team to posts for specific tasks over specific periods (e.g. for the periodic review in water); more exchange of staff in DTI and DEFRA and relevant outside bodies (e.g. EA, Ofwat, water and energy companies, Water Voice, Energy Watch etc) so that the energy and water teams have at least one or two staff with relevant expertise particularly at crucial times such as the price reviews.

Recommendation: Government departments need to become more informed consumers of advice from economic and other regulators and agencies. This means adequate staffing – numbers and expertise – and would be assisted by reducing excessive turnover of staff and greater exchange of staff between government departments, regulators, other agencies, business and consumer organisations.

Conclusions

The sustainability agenda is at present being inadequately addressed in energy and water. Regulators that were established for a clear narrow economic function have from time to time been expected to take on environmental and social issues without clear objectives and remit to do so, to some extent due to the absence of any other organisation that could take on these tasks. There are differences in water and energy and each have lessons to learn from the other. However, greater clarity would be achieved by keeping economic regulators focussed primarily on the task of economic regulation – assessing whether company bids for capital and operating expenditure in price control rounds are cost effective and monitoring for abuses of market power. They should be required to take account of sustainability issues – through a subsidiary duty and guidance – but this should not be their main focus. Other decisions should be taken by Ministers assisted by experts within their departments and in external agencies with a clear environmental and social remit.

As far as the social component of sustainability is concerned things are rather more developed in energy than they are in water with the government having a clearer policy on fuel poverty than on water affordability. Because of this, the energy regulator has been required to develop a social action plan and social issues are firmly on Ofgem's agenda. Fuel poverty has also been a major issue for the energy consumer body Energy Watch and there are a number of established non-governmental organisations that work closely with the relevant government departments on fuel poverty issues. In water the situation is very different – there has been no clear government steer to the regulator and the consumer body has to date been poorly resourced and not fully independent of Ofwat. This is clearly an area that the water regulator and new consumer body will have to consider. However, although there are some tensions between social and economic issues in many cases both can be resolved through similar action – pressure to keep prices low. The consumer bodies can also be expected to take a stronger interest in affordability than in meeting environmental standards. It is between economic and environmental considerations that the major tensions occur and thus where there is the greatest need for a counterweight to the economic preoccupations of the regulator.

In water, as far as the environmental questions are concerned, most of these conditions are now met with the role of the Environment Agency and the new duty on Ofwat following the 2003 Water Act. In energy however, there is neither a sustainable development duty nor a body such as the Environment Agency that can ensure that environmental questions are taken into account in economic regulation. If the Government is to achieve the sustainable energy economy envisaged in the Energy White Paper, these gaps in the policy context and institutional framework need to be tackled.

References

Cm 1200 (1990) *This Common Inheritance* HMSO

Cm 2068 (1992) *This Common Inheritance: the Second Year Report* HMSO

Conservative Party (1992) *The Best Future for Britain: the Conservative Manifesto*, 1992

Department of the Environment & the Welsh Office. 1993. *Water charges: the quality framework.* London: Department of the Environment.

DETR (1999) *A better quality of life. A strategy for sustainable development for the UK.* CM 4345.

DTI (1998) *A fair deal for consumers: modernising the framework for utility regulation.* London: DTI.

DTI (2002) Energy White Paper. *Our energy future – creating a low carbon economy*. London: DTI

DTI (2004) *Social and environmental guidance to the Gas and Electricity Markets Authority*. London: DTI

Fletcher, P (2003) *Ofwat's approach*. in Water, sustainability and regulation. Ed. D. Helm. Oxford: OXERA.

Hansard (2000) *Debate on Utilities Bill.* House of Lords Hansard.

HC 63 (2003) House of Commons Public Accounts Committee,. Second Report. *The New Electricity Trading Arrangements in England and Wales*

HC 185 (1994) House of Commons Trade and Industry Committee. Session 1993-94 *The Work of Ofgas*, Minutes of Evidence, 25.1.94 HMSO

HC 597 (2000) House of Commons Environmental Audit Committee. Session 1999-2000. *Water Prices and the Environment.*

Helm, D (2003) *Energy, the state and the market: British energy policy since 1979*. Oxford: OUP.

Helm, D (2004) *The new regulatory agenda.* London: Social Market Foundation

Mitchell, C (2000) *Neutral regulation – the vital ingredient for a sustainable energy future.* Energy and environment, Vol 11, No 4.

Newbery, D (2002) *England's experience with NETA.* Presentation to conference: International experience with energy liberalisation: lessons for Europe. Oviedo, July, 2002

OFFER (1994) *The Distribution Price Control Proposals* London: Ofgem

Ofgem (1999) *The new electricity trading arrangements*. London: Ofgem

Ofgem (2003) *Environmental action plan: annual review 2002-03*. London: Ofgem.

OFWAT. 1992. *The cost of quality: a strategic assessment of the prospects for future water bills*. Birmingham: OFWAT.

OFWAT. 1993. *Paying for quality: the political perspective*. Birmingham: OFWAT.

OFWAT. 1994. *Future charges for water and sewerage services: the outcome of the Periodic Review*. Birmingham: OFWAT.

OFWAT 2001. *Response to the Environmental Audit Committee Report. Prices and the Environment*. Birmingham: OFWAT

Terry, M (2003) *Customers' expectations*. in Water, sustainability and regulation. Ed. D. Helm. Oxford: OXERA.

Young, B (2003) *The Environment Agency's approach*. in Water, sustainability and regulation. Ed. D. Helm. Oxford: OXERA.