

Global economics, the environment and other sustainability issues are having a growing influence on the energy sector. Naturally, the focus of our work at Ofgem is reflecting on those changes as we think ahead on customers' behalf. Our new duties to future consumers and sustainability demand this of us, but we are already advanced in a number of projects that together encompass issues of security of supply, the impact of renewable energy growth and other environmental measures, and the rules governing the operation of the energy sector.

In one of those projects we are taking a hard look at the RPI-linked price controls that we have used to regulate the energy pipes and wires networks for the past two decades.

The project, RPI-X@20, is looking ahead at the new and significant challenges faced by the energy networks arising from the need to meet new social and environmental objectives, including the move to a low-carbon economy while ensuring continued reliable supply. Meeting these challenges could bring new costs. Regulation must keep a rein on those costs so that customers receive value for money. So it is right that we check that our approach remains fit for that purpose.

The decision to undertake RPI-X@20 did not arise because there were signs of cracking in the regime that has, since privatisation, driven efficiency in the energy network businesses. There are no such signs. Indeed, our current approach has served, and continues to serve, customers well. The review was born out of awareness that it is better not to wait until it comes to the crunch, before testing the vehicle – especially before a journey across new terrain.

We have an open mind as to the outcome of RPI-X@20, and we have emphasised from the beginning of the review that doing nothing is an option. That addresses the body of opinion that says the regime isn't broken. But RPI-X@20 has to ensure that the model we use in the future is able to meet society's changing demands and priorities, so all options, from do nothing, to tweaking and on to radical change, have to be on the table.

We asked some of the brightest minds in academia to work with industry to look at what sort of networks we might need in 40 years' time. The range of scenarios they came up with was broad. We may need to double the size of electricity transmission and distribution networks to connect large offshore wind and tidal generation in remote locations to heat our homes and charge our electric cars. Or we may need much smaller networks as we use more local generation sited close to our homes and have more energy-efficient houses and businesses.

This level of uncertainty about the future role and direction of networks is unprecedented. Over the past 20 years there has been little technical innovation that has challenged the way network companies plan, invest and operate their networks. Forecasting future network requirements has primarily been about predicting energy demand growth (driven largely by economic growth). There has also been reasonable confidence that, over their long lives, assets will be used.

So there is uncertainty, but we cannot allow this to paralyse investment decisions

Hannah Nixon explains why Ofgem has embarked on a wide-ranging review that questions the very fundamentals of current regulation, RPI-X@20



Back to basics

on the network. At the same time, we need to encourage industry to innovate while avoiding expensive mistakes.

The challenge of dealing with this uncertainty is compounded by the credit crunch, which has potential implications for demand, timing of capacity requirements and the energy companies' ability to raise finance for large investment programmes.

Some of the challenges facing the energy networks have been reflected already in recent price controls decisions. These decisions include money set aside for innovation, research and development and trialling new network technologies. Capital expenditure settlements have also been made outside the conventional price control schedule, such as the £560 million agreed for transmission infrastructure to accommodate expansion of renewable generation in Scotland. They also include promotion of sustainability through,

for example, incentives for local, low-carbon generation to connect to the regional distribution networks.

These moves have stretched RPI-X beyond its original design specification. And it will be tested further. Ofgem has already tightened its focus on paving the way for efficient delivery of a low-carbon economy and continued security of supply, alongside the conventional focus on operating efficiency. This is running alongside heightened concern about fuel poverty and wider social issues, and recently Ofgem's duties were adjusted to increase the emphasis on sustainability and future customers.

So the regulatory framework for energy networks may need significant changes if it is to match the needs of a low-carbon economy. Meanwhile, it has to clear the path for efficient investment to ensure security of supply and align with the European agenda of greater interconnection and open access. All these

objectives have to be delivered along with value for consumers' money.

The scope of RPI-X@20 is broad. In the first phase we will consider issues under two inter-related themes: focus on consumers and delivering a sustainable energy sector.

The basis for the first of these themes is the concern that network companies, and potentially the regulatory process, may not be sufficiently focused on consumers. Issues here include identifying what consumers want and are willing to pay for, and the alignment of incentives between networks, users of the network (such as generators, gas producers and suppliers) and consumers.

The second theme – delivering a sustainable energy sector – focuses on achieving environmental targets and ensuring security of supply. Achieving its aim will demand technical innovation, possible changes in the role of networks, and increased investment while potentially involving changes in the business culture and practices of network companies.

The changes that the networks may have to face suggest many options for consideration in RPI-X@20. A prominent view from two industry workshops was that RPI-X was not necessarily broken. However, they did say that it needed to be amended, particularly to ensure that investment in delivering a sustainable energy sector was efficient. There are other views that suggest a need for new elements within the regulatory framework, or even a radically different approach.

Options that could be incorporated within the existing framework include: measures to promote greater innovation; rewarding network companies for building in anticipation of future demand to get round planning delays; stepping up consumer (and supplier) participation in regulatory decision-making, possibly with a right to appeal proposed settlements; and greater use of tendering, which is already central to the offshore transmission regime.

Some interested parties have suggested that the RPI-X framework is not fit for the purpose of meeting the sustainability challenge and that a radically different regime is needed. One argument for this is that RPI-X favours the network status quo based on large transmission and distribution which, the argument goes, will not necessarily deliver value for money as a conduit for sustainable development.

Suggestions for radical change include promoting competition for energy services, and replacing the current ex-ante regulation (whereby networks are set targets upfront and are encouraged to outperform these) with an ex-post regime. The regulator would intervene only when concerns were identified about a company's behaviour or delivery of outcomes after they have been observed.

There are clearly many options on the

The regulatory framework may need significant changes to match the needs of a low-carbon economy

table. Yet with 18 months left to run, RPI-X@20 has been criticised as being over-long. A rushed job is not usually the best job. We need to carry many audiences with us in this review, including consumer groups, capital markets, government as well as the industry. There are also developments, anticipated in 2009, that we expect will add to the review's findings.

For example, we expect to hear the views of the Commission on Climate Change and Europe's evolving institutional structures. Furthermore, Ofgem is undertaking a number of other forward-looking work projects, which could add to RPI-X@20. These include Project Discovery, which is assessing whether markets will maintain security of supply in the face of the credit crisis and closures of coal and oil stations under environmental legislation; and an overhaul of the rules governing the operations of the energy sector.

RPI-X@20 embodies Ofgem's view that the changes we face are such that we cannot afford simply to expect that our existing ways will be up to the new challenges. Ofgem has invested much of its energy in getting ahead of the game to spot the challenges and opportunities Britain faces in its move to greater sustainability, new sources of gas, and a post credit crunch financial environment. We are looking ahead on many fronts in a bid to protect the interests of consumers. Our work will continue to deal with the issues that concern consumers here and now, but we have to make sure we are entering the future equipped for new, largely uncharted terrain. ■

Hannah Nixon is Ofgem's director of regulatory review

RPI-X price controls: two decades of success in cutting costs and raising service standards

The energy networks account for around 20 per cent of energy customer bills. The current regulatory approach, based on capping revenue at a fixed, predetermined number of percentage points (X) below the retail price index (RPI), has served customers well in the 20 years since privatisation.

Price controls have driven down the revenues that network companies are allowed to earn from their network charges. Since privatisation, the revenue network companies

have collected from customers has declined by more than 30 per cent for the electricity networks, and by more than 40 per cent for the gas networks. At the same time, quality of supply has improved with a decline of some 30 per cent in the reported average number of power cuts and a reduction, also of around 30 per cent, in the reported average duration of power cuts.

There has also been considerable investment in the network. Before privatisation,

investment in the national grid was about £250 million a year, rising to around £400 million post privatisation. Under the current regulatory package, projected investment is in the order of £1 billion a year. The electricity distribution companies have a similar story to tell. In the five years before privatisation, investment totalled £750 million a year. It was in the order of £1 billion post privatisation and is projected to be some £1.5 billion under the current price control.