

# Agenda

## Advancing economics in business

### RPI – X: time to RIP?

**There is little question that price cap regulation has performed well as a regulatory innovation. From its development in the 1980s it has been applied in one form or another to sectors from energy and water to airports, telecoms and postal services. But across a number of sectors governments and regulators are reassessing the basis of the current approach to regulation. Does this herald significant change? How should regulators and infrastructure companies engage in the debate that is sure to follow?**

The current model of price cap regulation for utilities has withstood the test of almost 25 years, with only limited changes to its basic principles. First adopted in the UK when BT was privatised in 1984, RPI – X has been rolled out across a number of infrastructure sectors (energy, airports, and water) where monopoly pricing of access to networks has been a critical concern. It has also been adopted in other sectors, such as postal services, with very different business structures, and where historical monopolies have been unwound to the point where, from 2010 (later for a few countries), there will be no legal barriers to entry in countries throughout Europe.

#### The RPI – X legacy

Many of the key features of the model, including the use of a periodic review process, ‘building blocks’ analysis—where investments are integrated into a regulatory base to earn a return, and various incentive mechanisms to promote quality and efficiency, have remained at the heart of the system for over 20 years. For example, the tools and debates surrounding how to measure allowed returns are broadly similar to those used in the early reviews. Quality-of-service standards have been tweaked and, in some cases, the amount of money at stake ratcheted upwards; but otherwise today’s approach would be familiar to observers of the regime established for water and electricity in the early 1990s.

That is not to say that the model has remained static in its application, or that there is a ‘one-size-fits-all’ approach. There are significant sectoral and national differences in the application of price cap regulation—for example, even within the airports sector the use of a (consumer price index) CPI – X framework to set landing charge limits in the case of some European airports, such as Amsterdam Schiphol or Copenhagen Airport, is largely based on a negotiated outcome with government

departments, and, in terms of process, bears little resemblance to the more detailed approach adopted in the UK.

Furthermore, compared with the early regulatory reviews, far more effort is now put into trying to achieve the ‘right’ answer, and a number of new tools (eg, the menu system, which encourages companies to choose cost-efficient capital programmes) have been developed to help regulators in this regard. The business planning process is far more intensive and interactive compared with even a decade ago, and there has been much more focus in recent years, at least in some sectors, on examining the appropriate industry structure and scope of regulation, with debates such as functional separation of wholesale and/or retail activities from networks rising up the agenda in telecoms, water and postal services. In addition, an array of new tools including auctions and incentive-sharing mechanisms have been incorporated into the framework in order to deal with challenges such as adding new capacity in the face of uncertainty.

Nevertheless, with the standard RPI – X model having been successful in encouraging significant efficiency improvements, delivering increased investment, and, in most sectors, improved quality of service for customers, one might well ask whether there is a need for significant change. The framework has also been sufficiently flexible to handle the growth in competition in various parts of the value chain—for example, the introduction of retail competition in electricity and gas supply in 1998.

With this apparently successful track record, it may be somewhat surprising to find that the regulatory framework is under increasing pressure for reform in virtually every industry in which it has been adopted, as the following examples show.

## Airports

The existing framework for economic regulation in the airports sector has been a key issue in the Competition Commission's market investigation. Questions have related to the impact of regulation on incentives to invest, ensure quality, and enforce remedial action where problems arise. A separate government review of the the economic regulator, the Civil Aviation Authority (CAA), is also currently under way, the purpose of which is to consider whether the powers available to the regulator remain fit for purpose more than 20 years after they were defined in the Airports Act 1986.

## Water

The core framework for the 2009 periodic review (PR09) will be similar in many respects to that of PR04. However, changes include greater use of cost-benefit analysis to justify investment programmes; the use of a menu system to underpin capital expenditure (CAPEX) forecasting; and the development of a longer-term business planning process. In addition, the model for introducing competition into the sector in England and Wales is under close scrutiny. This reflects the failure of the existing framework for competition to lead to any switching among eligible customers (those consuming more than 50 megalitres/annum). First, Ofwat is currently reviewing the basis of the current model of competition and is consulting on a programme of progressive steps towards liberalisation of the retail and wholesale markets. Significant changes to the regulatory process are envisaged, including accounting separation of the key elements of the value chain; separate price controls; and changes to the basis of regulation relating to access to the water network. Ofwat's review will feed into an independent review of water competition commissioned by the Department for Environment, Food and Rural Affairs, due to be published in the spring of 2009. This will consider:

the scope to deliver benefits and drive innovation through developing competition and contestability in all aspects of the supply chain in the water and sewerage sector and will recommend changes to the legislative and regulatory frameworks needed to deliver those benefits.<sup>1</sup>

## Postal services

The rapid pace of entry in the liberalised market, along with widely publicised concerns regarding the financial position of Royal Mail and the implications of this for the future viability of the universal service, have led to a number of strategic reviews being launched. An independent review, commissioned by the Department for Business, Enterprise and Regulatory Reform, is under way with a focus on identifying how developments in the market may affect the Universal Service Obligation (USO).<sup>2</sup> The regulator, Postcomm, has also been

conducting a strategic review of the market, including a consideration of the interaction between the regulatory framework and competition.<sup>3</sup> In its forward work plan it has identified the need for reviews of access competition, end-to-end competition, the USO and wholesale equivalence.<sup>4</sup>

## Energy

Ofgem, the energy regulator in Great Britain, recently announced a major review of the regulatory framework, which is due to report after the completion of the next distribution price control review in 2010.<sup>5</sup> The remainder of this article focuses on the key drivers for this review, and draws out some of its wider implications.

## Ofgem's 'RPI at 20' project

On March 6th, the Chief Executive of Ofgem, Alistair Buchanan, gave a speech to the Society of British Gas Industries, which could represent an important milestone in the evolution of economic regulation.<sup>6</sup>

While recognising that the existing framework has delivered a great deal, Alistair Buchanan identified a number of key drivers for the review, including the following.<sup>7</sup>

- **Running a 'health check'**. After 20 years, Ofgem needs to consider whether the existing tools and policies used in network regulation are appropriate in today's environment. It would also benefit from a more thorough consideration of the wide range of issues raised by academics, industry participants and other observers as to how the process of energy regulation may be improved in light of industry developments and international best practice.
- **The carbon challenge**. It has become increasingly clear that the energy sector will be required to play a leading role in the drive to limit carbon emissions. Government initiatives, such as the target for a 20% share for renewables of energy production, are likely to lead to major changes in the structure of generating capacity, and investments to increase the level and flexibility of transmission capacity. The question that arises, therefore, is how the regulatory framework will need to evolve to deal with these challenges.

While the detailed scope of the review has yet to be defined, the speech also identifies a range of areas for consideration, as discussed below.

## New models of regulation

As captured in a series of papers co-authored by the former energy regulator, Professor Stephen Littlechild,<sup>8</sup> a range of approaches to energy regulation have been developed in North and South America, which may have useful parallels for the UK and Europe. For example, in

Florida a consumer advocate has taken a lead role in negotiating network tariff reductions, using the implied threat of referral to the Public Utilities Commission. In Argentina, negotiations between buyers of power and network providers have proved successful in defining the nature of required new electricity network assets. In Canada, once the weighted average cost of capital (WACC) was (separately) established, market participants were able to agree tariffs for oil and gas pipelines. While it will be important to consider how the industry context in Europe may differ from those in the USA and Latin America, these examples do point to areas where a regulator can obtain support in reaching wider objectives from market-based participants.

An analogous development is in the airport sector, where the CAA has developed a process of 'Constructive Engagement' to enhance the role of the airlines in agreeing in conjunction with airport operators the main elements of the capital programme and service requirements to be delivered at airports. The idea, as in the electricity examples noted above, is to let market participants, rather than the regulator, decide what investment is in their best interests. Of course, at the same time it must also be recognised that the role of the regulator will continue to be of critical importance, and this approach is not a panacea for addressing the admittedly difficult trade-offs between investment, pricing and quality. These factors may help explain the Competition Commission's critical assessment of Constructive Engagement, namely that it has failed to deliver the 'appropriate level, specification and timing of investment (or) the appropriate level and quality of operational service to airlines and passengers'.<sup>9</sup>

### Ofgem's roles and responsibilities

A key question is whether Ofgem's existing roles and responsibilities are aligned to the future policy environment in which it will be operating. Pollitt (2008)

has suggested, for example, that Ofgem's role as a sectoral competition authority may no longer be appropriate in light of evolving priorities.<sup>10</sup> Pollitt puts forward a number of possible factors leading to this conclusion.

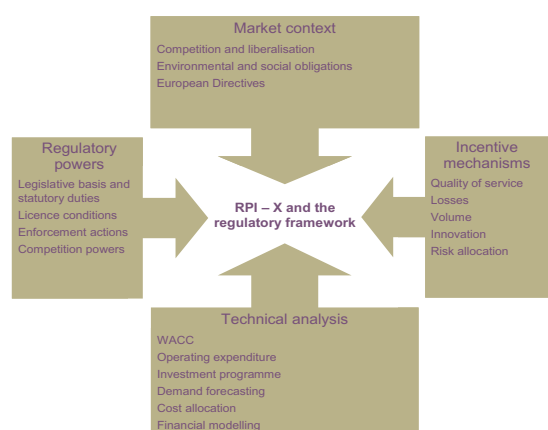
- Competition in the sector may have matured to the point where it is no longer essential to have ongoing sectoral monitoring (rather, general competition authorities may be better placed to apply the structural remedies which have been important in securing benefits elsewhere).
- A primary focus on competition may, at best, divert Ofgem from other, more important priorities, or may even place the regulator in conflict with these. How, for example, might Ofgem reconcile steps which may need to be taken to encourage grid access for renewable sources of energy, with competition-based concerns regarding distortions to the market?

Irrespective of whether observers agree with these points or not, it is clearly important to ensure that the roles and powers available to regulators are aligned with developments in the market.

### Financial and incentive issues

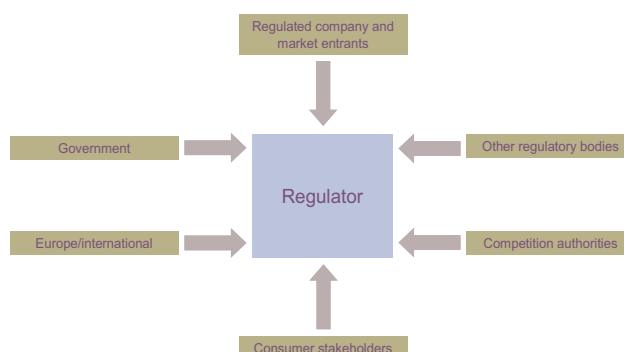
Ofgem will of course need to consider whether the regulatory model needs to evolve to ensure that the appropriate balance is achieved between protection of consumers and the future development and financial viability of operators. There have been a wide range of proposals and issues of a rather more technical nature to address the financial incentives. These include the ideas of split returns or indexed rates of return (which have been explored but not adopted in some other sectors such as water),<sup>11</sup> or alternative means of addressing the financial challenges which may confront companies as they ramp up their investment programmes.<sup>12</sup>

**Figure 1 The regulatory toolkit perspective**



Source: Oxera.

**Figure 2 The regulatory stakeholder perspective**



Source: Oxera.

## Where do we go from here?

The Ofgem review, like the other major reviews of regulated industries concurrently running in the UK, can be seen from two perspectives. First, from that of the regulatory toolkit: what do regulators need to achieve, and how they can do so? Second, how should regulatory institutions interact with stakeholders in order to best deliver their duties? These perspectives are illustrated in Figures 1 and 2.

Keeping these perspectives in mind, what are some of the main themes that may develop from the ‘RPI at 20’ project and the reviews being led across the infrastructure sectors? A few brief thoughts are suggested below, but are by no means exhaustive.

### In relation to the regulatory toolkit ...

- **Market context.** A critical issue here is the interaction between competition and regulation. How can the scope of regulation be best defined to offer residual monopoly protection, while avoiding the risks of acting as a barrier to entry or threatening the financial viability of incumbents through ‘double jeopardy’?
- **Incentive mechanisms.** Incentive regulation has delivered, and is undoubtedly here to stay. The regime has also proved sufficiently flexible to introduce market mechanisms such as auctions to improve investment incentives. Yet regulators will increasingly need to consider both standard pricing incentives and non-price tools. As government priorities frequently aim for quantity—rather than pricing—objectives (such as a renewables target), regulators need to consider what price and market mechanisms can be used to deliver priorities.
- **Technical analysis.** The quality of technical analysis has improved enormously. While simplicity is often a valid objective, it cannot be achieved at the expense of the credibility of the evidence base used for decision-making.
- **Regulatory powers.** Postcomm and the CAA are currently setting out the case for an increased role in enforcing competition rules, while at the same time there is debate (at least from the academic perspective) about the opposite move in the energy sector. There also seems to be a significant degree of debate about whether regulators are doing ‘too much’ (this is Royal Mail’s perspective on postal regulation) or ‘too little’ (the impression given by the Competition

Commission of the CAA’s regulatory focus, although this is in itself considerably more involved than, for example, at large continental hubs).

### ... and in relation to the key regulatory stakeholders

- **Government.** Should the role of regulators, relative to government, evolve? While independence is a critical aspect of maintaining regulatory stability and encouraging investment, there may need to be a more formal mechanism whereby government policy can be incorporated into regulatory objectives.
- **Relationships between regulators.** The fact that virtually all regulatory sectors in the UK are currently subject to extensive internal and independent review at least raises the question of whether there should be a cross-regulatory body leading this area. Clearly, many of the issues will be sector-specific, but there may well be common themes (such as the approach to functional equivalence) which could be usefully addressed with a wider perspective.
- **Competition authorities.** As noted above the relationship between regulators and general competition authorities could well be in flux. The government’s review of the CAA could ultimately lead to that organisation gaining sectoral competition powers, while the mandatory reference of airport charging reviews to the Competition Commission may be identified as an anomaly to be corrected. It is interesting to note the contrast with the line of reasoning set out by Pollitt (2008): that in energy competition policy, oversight could benefit from being moved back to the UK Office of Fair Trading.
- **Consumers and users.** While the trend towards increased customer consultation, via willingness-to-pay surveys, for example, seems likely to continue, an area of greater controversy is the transfer of effective responsibility from regulators to users of the infrastructure in working with operators to define objectives for capacity, quality, and investment. While there are examples of this working well, in situations of bilateral market power it is less clear that a user-negotiated outcome would be in the wider public interest.

As the sectoral reviews play out and report later in the year, will clarity emerge on some of these themes? The regulatory world awaits with interest ...

<sup>1</sup> 'Independent Cave Review', available at <http://www.defra.gov.uk/environment/water/industry/cavereview/tor.htm>.

<sup>2</sup> 'Independent Review of Postal Services Sector', available at <http://www.berr.gov.uk/sectors/postalservices/Review/page45129.html>.

<sup>3</sup> Postcomm (2007), 'Postcomm's Strategy Review: The Postal Market in 2010 and Beyond—Emerging Themes', August.

<sup>4</sup> Postcomm (2008), 'Postcomm Forward Work Plan: 2008–2011', April.

<sup>5</sup> Buchanan, A. (2008), 'Ofgem's RPI at 20 Project', speech at Society of British Gas Industries conference, March 6th.

<sup>6</sup> Ibid.

<sup>7</sup> As stated by Alistair Buchanan, 'Since 1990 the electricity distribution charges have been halved and transmission charges cut by 41%. The NAO showed that the DNOs cut annual operating expenditure (opex) by 7.7% in the 11 years to 2003, and even the local gas networks (who were not part of the competing ownership model until 2005) made 4.3% cuts in annual opex according to NAO estimations. In the fifteen years to 2005 we saw 11% fewer power cuts and the duration of those interruptions fell 30%.'

<sup>8</sup> For example, Littlechild, S.C. (2007), 'The Bird in Hand: Stipulated Settlements in Florida Electricity Regulation', Electricity Policy Research Group Working Paper No. EPRG 07/05; Doucet, J. and Littlechild, S.C. (2006), 'Negotiated Settlements and the National Energy Board in Canada', Electricity Policy Research Group Working Paper No. EPRG 06/29; and Littlechild, S.C. and Ponzano, E.A. (2007), 'Transmission Expansion in Argentina 5: The Regional Electricity Forum of Buenos Aires Province', *Energy Economics*, Elsevier.

<sup>9</sup> Competition Commission (2008), 'BAA Market Investigation: Emerging Thinking', April, para 265.

<sup>10</sup> Pollitt, M.G. (2008), 'The Future of Electricity (and Gas) Regulation', ESRC Electricity Policy Research Group and Judge Business School, University of Cambridge, May.

<sup>11</sup> Helm, D. (2008), 'Tradeable RABs and the Split Cost of Capital', January. Available at [www.dieterhelm.co.uk](http://www.dieterhelm.co.uk).

<sup>12</sup> Holt, D. (2005), 'Financing Investment: Can Regulation Adapt to New Challenges?', presentation at the Oxera conference, The Future of Infrastructure Regulation, March 1st.

If you have any questions regarding the issues raised in this article, please contact the editor,  
Derek Holt: tel +44 (0) 1865 253 000 or email [d\\_holt@oxera.com](mailto:d_holt@oxera.com)

Other articles in the June issue of *Agenda* include:

- 2-to-1 mergers: impossible to clear?
- funding public transport services: in need of standard regulation tools?
- trouble-play? monitoring retail bundles launched by dominant telecom operators

For details of how to subscribe to *Agenda*, please email [agenda@oxera.com](mailto:agenda@oxera.com), or visit our website

**[www.oxera.com](http://www.oxera.com)**