# Incentive Regulation from the Inside: Resetting 12 RPI-X Price Caps in 1993-5

**Stephen Littlechild[1,2]**

**Abstract**

After a brief account of my proposed RPI-X incentive regulation for British Telecommunications (BT) in 1983 and for the water industry in 1986, this paper documents my simultaneous resetting in 1993-95 of the RPI-X price caps for the 12 electricity distribution companies in England and Wales and two in Scotland. I proposed unprecedented price reductions, but the media thought that I should have intervened earlier to tighten the Government's initial five-year caps and remove alleged excess profits, and then I should have set even more severe revised price caps than I proposed. In the event, I finally reopened the review and tightened the proposed caps. On reflection, I was trying to implement incentive regulation in the face of an overwhelming media demand for rate-of-return regulation. This account of why my own process achieved such significant price reductions yet was so problematic -- and how our regulatory thinking evolved (or failed to) in the light of events and media pressure -- may help to explain why incentive regulation has been widely adopted but subsequently much modified, in the UK and elsewhere. It may also provide some insights into how regulation could usefully be developed further to meet the challenges of tomorrow. The paper concludes with some suggested modifications to the regulatory process: particularly to incorporate more negotiation with interested parties in order to get initial agreement, and then to incorporate ongoing appraisal and more rapid adjustment to evolving company and market conditions.

Key words: incentive regulation, price caps, negotiated settlement

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## 1. Introduction

The editors have kindly invited me to provide a historical and personal perspective on incentive regulation. The present paper focuses mainly on my experience in resetting certain incentive price controls - "what it was like from the inside" - in my role as GB electricity regulator (Director General of the Office of Electricity Regulation, or OFFER, 1989-98).

[1] Emeritus Professor, University of Birmingham, and Fellow, Cambridge Judge Business School. sclittlechild@tanworth.mercianet.co.uk

[2] I am grateful to OFFER colleagues, particularly Geoff Horton (Director leading the price control reviews), Andrew Walker (in Geoff's team), and Penny Boys and Peter Carter (successive Deputy Directors General), for their invaluable advice and support throughout the price control reviews that are discussed herein, and for their helpful input on this paper. I also appreciate comments and suggestions from Tim Brennan, Harry Bush, Sir Ian Byatt, Lewis Dale, Richard Green, Chris Harris, Sir Dieter Helm, Mark Jamison, Derek Lickorish, Bruce Mountain, Michael Pollitt, John Roberts, Andrew Smithers, Tim Tutton, Tony White and the editors of this issue.

This paper begins with a brief account of my proposed RPI-X incentive regulation for British Telecommunications (BT) in 1983 and for the water industry in 1986.[3] It summarises the Government's privatisation programme and its initial RPI-X price caps for all sectors, and the approaches that were taken by other regulators in resetting these initial caps. It then documents the evolution of our regulatory thinking, and my own resetting in 1993-95 of the RPI-X price caps for the 12 electricity distribution companies in England and Wales and two in Scotland.

This resetting proved controversial and received much media attention at the time and some academic examination later.[4] I do not claim it as a model to follow: During that period numerous newspapers called for my resignation, and some referred to it as "the botched review" (Green 2005). Basically, the media thought that I should have intervened earlier to tighten the Government's initial five-year price caps and remove alleged excess profits. Then I should have set more severe revised price caps than I proposed. In the event, I reopened my review and tightened my proposed caps, although the manner of that also proved controversial.

On reflection, I was trying to implement incentive regulation in the face of an overwhelming media demand for rate-of-return regulation. A detailed account of why my own process achieved such significant price reductions yet was so problematic -- and how our regulatory thinking evolved (or failed to) in the light of events and media pressure -- may help to explain why incentive regulation has subsequently been much modified, in the UK and elsewhere. It may also provide some insights into how regulation could usefully be developed further to meet the challenges of tomorrow.

This paper therefore concludes with some suggested modifications to the regulatory process: particularly to incorporate more negotiation with interested parties in order to get initial agreement, and then to include more ongoing appraisal and more rapid adjustment to evolving company and market conditions.

This paper draws on relevant OFFER documents that I happen to have kept, and on contemporary newspaper comments. Regrettably, almost all OFFER publications and unpublished internal documents apart from the Annual Reports have since been destroyed.[5]

## 2. Privatisation, competition and regulation of BT

Many UK industries -- including energy -- were nationalised in the late 1940s. They were then financed and often subsidised by the Treasury. Short-term considerations dominated, such as prices and capital spending. The industries became increasingly inefficient and lacked investment. Various Government White Papers -- notably in 1961, 1967, and 1978 -- prescribed

[3] RPI is the Retail Price Index -- the UK measure of inflation in the economy as a whole -- and X is a number to be specified in setting the price cap. On my proposed approach, see also Littlechild (1983, 1986, 1988, 2001, 2003).

[4] Westlake and Beckett (1996) give the perspective of one of the electricity companies. Appleyard and McLaren (1997), Pallett (1998), and Dnes and Seaton (1999) report event studies of the impact on share prices. These and comments by Helm (2003 ch. 11), Green (2005), Henney (2011) and Jamison (2015) are discussed below.

[5] "Ofgem's third party records storage contractor has been instructed to destroy files over 20 years old in line with Ofgem's obligations under the Public Records Act 1958, apart from a very small number which are in the process of being selected and prepared for The National Archives, including OFFER files regarding NETA and Nuclear Review" (Ofgem [successor body to OFFER] personal communication [henceforth pc], 13 Dec 2023).

pricing and investment policies. In practice, these policies were juggled for political ends -- not least to try to combat inflation in the 1970s.[6]

In 1979 Mrs. Thatcher was elected Prime Minister (PM). In 1980 the Government began to consider the scope for competition in telecommunications, and Professor Michael Beesley was asked to advise. The 1981 Telecommunications Act enabled Mercury to enter as a competitor for long-distance calls. In 1982 the Government announced its intention to privatise BT and created a new regulatory body Oftel. There was some prospect of competition in future; but how to deal with BT's present monopoly power? The Department of Industry (DOI) proposal was to specify permitted maximum and minimum rates of return, to be reassessed every five years. (Parker 2009)

Professor Alan Walters, the PM's economic adviser, argued against rate-of-return [ROR] regulation, citing problems in the US; he proposed instead an 'output-related profit levy'. An Interdepartmental Working Group found against Walters' proposal. Professor Beesley doubted whether either scheme would achieve its regulatory objectives. The DOI endorsed the maximum-minimum rate-of-return regulation. But Walters refused to give up. Patrick Jenkin, the DOI Secretary of State, asked me to evaluate these alternative proposals, expressing a desire for "regulation with a light rein".

Why was I invited? I assume for three main reasons. First, my early research was on optimal pricing -- including a book on *Elements of Telecommunications Economics* -- and I was familiar with US telecoms regulation.

Second, as a part-time adviser at the Treasury in the 1970s, I had seen at first-hand the ineffectiveness of Government policy to promote marginal cost pricing in the inefficient nationalised industries; and as an academic (Professor of Commerce, University of Birmingham) I was one of the few economists at the time to argue instead for allowing competition in these industries (with an Austrian/Schumpeterian/Hayekian emphasis on competition as a rivalrous discovery process) and later for denationalisation/privatisation as a more effective means to increase efficiency (Littlechild 1978, 1981).

Third, I was known to Alan Walters, who taught me statistics at the University of Birmingham, and I was later his colleague there in 1964-5; and I had spent summer 1965 researching with Michael Beesley, Walters' former University of Birmingham colleague, then part-time Chief Economic Adviser at the Ministry of Transport.[7]

I was unimpressed with both Walters' scheme and the Working Group proposal: "the choice would be between a scheme that is largely unknown and a variant of one that is known to be

[6] The annual inflation rate ranged up to 6% in the 1950s and 1960s, then rose to 24% in 1975 and 18% in 1980.

[7] I recently discovered Walters' diary entry of his meeting with Patrick Jenkin [PJ] on 20 October 1982. "PJ said he found my schemes attractive but (1) Elasticities (2) Output predictions and (3) Large Profits? Politically? - easy to dispose of them. Agreed to include enabling clause in bill and get Beesley or Littlechild or Heath [[Professor John Heath, London Business School] to set up a proper Walters system. Civil servants were very defeatist - the old ROR system is well tried. We know all about it and it does not work! Ministers much more willing to try new things." at https://archive.margaretthatcher.org/Walters/Walters1982diary.pdf)

unsatisfactory. Neither can be recommended" (Littlechild 1983, para. 11.32, p. 31). That's as far as my draft report went, which was submitted on 17 December 1982.

But I agonised further. On 6 January 1983 I again discussed the situation with Beesley, as I had throughout. We had both concluded that, however much we disliked price controls, in this particular instance a price cap would be better than a variant of rate-of-return control.[8] But time was short.[9]

I thought I could make something of a provision in the 'Buzby Bond' that had recently been announced in the March 1982 budget. BT needed more capital than the Government could provide, to meet growing demand and to modernise. A 1980 proposal was that the still-nationalised BT could access the private capital market via a 'revenue bond' with the return on the bond dependent on the growth in BT's revenues. In early 1981 Andrew Smithers of Warburgs, BT's financial advisers, had suggested instead relating allowed price increases to the rate of inflation, conventionally measured by the Retail Price Index (RPI). Hence the Buzby Bond provision that "BT will be expected … to keep tariff increases at least two percentage points below the annual movement in the RPI". [10] It was also a way of assuring investors that prices would be allowed to increase with inflation.[11] However, when the Government decided to privatise BT, this Buzby Bond was no longer needed.

My suggestion was to use this approach – which I summarised as RPI – X -- as a cap on a specified basket of prices, for products such as local calls and line rentals where competition was not imminent. I called it a Local Tariff Reduction Scheme. The aim was to reassure customers that things would get better, in real terms, with privatisation and competition.

I scored the scheme highest of the various regulatory options on protection against monopoly power, and on burden of regulation, consistent with the Secretary of State's stated preference for "regulation with a light rein". It scored highly on efficiency and innovation and on promoting competition – not because it embodied specific incentives to those ends, but because it least restricted the new incentives that would be provided by private ownership and competition: e.g., to reduce costs and waiting lists, to invest, and to innovate.

An RPI-X scheme seemed to have an additional advantage, of which I was very conscious: Since it was based on a proposal that had been previously put forward by BT's own advisers, I thought it would help to get BT onside, as a critical player in this issue -- or at least would

[8] Since we both favoured an Austrian free-market approach, I was concerned about going down in history as a man who proposed another price control. And I still fear that my gravestone will say RPI instead of RIP.

[9] "That left one week in which to write it up in a plausible way, test it against the specified criteria, conclude that it was the best available option, and make some further recommendations" (Littlechild 2003a, p. 35).

[10] "I proposed it at a meeting at the Treasury … I argued that this would provide a strong encouragement to BT to improve productivity, and that by having [this percentage] fixed for five years it would provide the degree of certainty and freedom from arbitrary government interference that was needed to get investor support. I also added that its simplicity was an additional plus as complexity would discourage investors and raise the required return" (Andrew Smithers, pc 2 Nov 2023).

[11] "… as revenues are a function of allowed prices as well as the volume of services, if investors were to be attracted to the bond there would need to be a visible and binding formula to restrict Government intervention in BT's future pricing.. … The bond [was] known as the 'Buzby Bond' after the cartoon crow, Buzby, then used in BT's TV advertising campaigns" (Parker 2009, pp. 248-9).

make it difficult for BT to object.[12] Moreover, this would also make it difficult for anyone to challenge its practicality.[13]

Walters was supportive,[14] and ministers agreed. I thought at the time that the initial level of X could be set relatively quickly -- in a few weeks' bargaining process between the Government and BT -- because it was essentially a political rather than economic decision. BT's post-flotation share price would adjust to give investors the market-determined cost of capital, so there was simply a trade-off between benefits to customers (from high X, lower prices) and flotation proceeds (from BT's initially becoming a private-sector, publicly traded company) for the Treasury (from low X, higher prices). In the event, the process to set RPI-3 was not at all simple.[15] But none of the negotiations were public knowledge or known to me.

## 3. Further thinking and advising on water and airport regulation, 1983-89

The decision to privatise BT meant that, in principle, any of the nationalised industries could now be privatised; hence privatisation could now be openly discussed (which was not previously the case). Beesley and I argued strongly for prioritising the potentially competitive nationalised industries, including by restructuring them first. We said that "rate-of-return regulation should not be thought of as a relevant accompaniment to privatisation" and that an RPI-X constraint "'holds the fort' until competition arrives and is inappropriate if competition is not expected to emerge" (Beesley and Littlechild, 1983a).

The Treasury commissioned further work from us on industries where monopoly power was likely to be a problem. We suggested ways to enable competition.[16] But after much internal debate, the Government privatised British Gas in 1986 without any restructuring or competition, and with a price cap of RPI-2.

What if competition simply was not possible, as with the 10 Regional Water Authorities (which also provided sewerage)? The Department of the Environment asked me to advise whether an

[12] Fortunately, perhaps, I was not aware at the time of the severe reservations expressed, earlier and later, by BT's chairman (Parker 2009, pp 280-289).

[13] For the same reason, I cited the then-recent November 1982 recommendation by the Monopolies and Mergers Commission [MMC] to impose an RPI-related price cap on contraceptive sheaths (MMC 1982). Dick Smethurst, a member of the MMC panel that recommended the tariff restriction on LRC Products in 1982, confirms that he and the MMC panel "were aware of the British Telecom RPI-2 proposal and that it did influence our/my conclusion" (email 9 Apr 2024). I also recall seeing at some late stage the suggestion by Baumol (1982) to use productivity-incentive clauses in US regulation. I found this encouraging, but decided not to reference it because, as an academic economist, I wanted to avoid any suggestion that this was a theoretical idea dreamed up by academic economists rather than a practical proposition for a regulated business.

[14] "I would describe it [the Report] as masterly, were it not that I feel inhibited from heaping such fulsome praise on my old student!" (Walters to Secretary of State, 27 Jan 1983, T538/79/1 at National Archives).

[15] Because the parties could not agree, the Department commissioned a six-month study. At one point, "The Treasury was of the view that X should be set somewhere between 3% and 5% and perhaps as high as 7.5%, while BT felt it should be zero or at most 1%" (Parker 2009 p. 283). In the end, the Government took some 15 months to agree that X should be 3%. That agreement involved extending the coverage of the RPI-X constraint to include long-distance as well as local calls -- otherwise X would have been much smaller or even negative. (Local calls had previously been subsidised by long-distance calls, and competition would mean unwinding such cross-subsidies.)

[16] Beesley and Littlechild (1983b). My section on electricity included the then-novel suggestion of competing private electricity retailers, with regulated access to transmission and distribution networks.

RPI-X constraint was still appropriate. I concluded that "This type of constraint [RPI-X] is preferable to rate of return regulation of profits because it is simpler, less expensive and interventionary, and less vulnerable to 'cost-plus' disincentive effects" (Littlechild 1986, para. 1.14, p. 2). I also suggested a uniform X value across all 10 water authorities, to simplify regulation and bearing in mind "the practical difficulty of negotiating ten different X's".

The Government next privatised British Airports Authority (BAA) in 1987 with RPI-1. The Department of Transport later explained that it had set the X value for BAA by making forecasts of revenues and costs, including operating costs (opex) and capital expenditure (capex), with assumptions as to capacity utilisation and increased efficiency. Various financial indicators or ratios were also specified, and "a value of 1 was chosen", with no further explanation.[17]

The MMC was asked to advise on setting the initial control for Manchester Airport. As a member of the MMC (1983-8) I was appointed to the relevant panel.[18] I argued against basing the level of X on rate of return,[19] cited my recent suggestion for the water sector,[20] suggested that the rate of return should be just one of several considerations, and concluded "If possible, there would be merit in choosing X equal to 1, as for BAA."[21] In the event, the MMC accepted the airport's own assumptions, though it thought some of them cautious. It used the company's financial model to predict various financial indicators and ratios, and then chose a value of X that balanced the interests of customers and the company.[22] It recommended RPI-1.

Then back to water privatisation: The Government concluded that the 10 water authorities had very different cost structures and investment needs, and that they would need real price

[17] The financial indicators were "Dividend cover must be greater than 1. Gearing should not exceed 25%. Interest cover must be greater than 1.25. Pre-tax profits should not decline in real terms after 1986/7." Then, on "Determining the Value of X", "The various forecasts already described were incorporated into an overall forecast of BAA's financial position with different values of X. As a result a value of 1 was chosen" (MMC 1987, working paper MA 95, 11 Aug 1987).

[18] Where I argued for the 'tariff basket variant' of RPI-X, based on actual outputs and RPI in the previous year, as opposed to the 'revenue yield variant', which required forecasts of output and RPI (MMC 1987, working paper MA 185, 6 Oct 1987).

[19] "There is a real danger of incurring many of the now recognised disadvantages of the US approach, which the original RPI-X scheme was precisely designed to avoid. By not focusing on profit rates directly, RPI-X was designed to minimise the need for forecasting and calculating and prescribing, and to restore incentives which rate of return regulation removed or distorted" (MMC 1987, "Choosing X", draft working paper to MMC panel, 19 Oct 1987, pp. 5-6).

[20] "… the application of RPI-X to water showed how the difficulties of a permanent regulatory scheme could be dealt with without invoking rate of return (e.g. by making uniform changes in X for all water companies together, thereby effectively forcing each company to compete against the others in efficiency, and reducing the danger of regulatory capture" (Ibid., p. 6).

[21] "This is not because the conditions at the two airports are so similar that the 'optimal' levels of X are identical. Rather, a value of X=1 for Manchester is appealing *precisely because* it was chosen for BAA (whether or not it was optimal there). It reduces the burden of subjective judgement on the regulator (whether the CAA or Commission). Instead of posing and answering the question 'what is the optimal rate of return and what level of X is needed to ensure this?', the much simpler question can be posed and answered: 'is there a reasonable prospect that X=1 will prove satisfactory for all those concerned with Manchester Airport …?" (Ibid., pp. 9-10).

[22] The financial estimates were of "operating profit before and after interest and tax, net current assets, shareholders' funds, gearing or debt-equity ratio, self-financing ratio, interest cover, dividend cover, and return on capital employed. The MMC then 'looked for a value of X which would give the necessary degree of protection to users of the airport while leaving the company in a financially sound position and able to carry through its capital expenditure plans'" (Beesley and Littlechild 1989).

increases to achieve improved water-quality requirements. They were privatised in 1989 with ten-year RPI+K price caps, where the K values differed by authority, ranging from 3% to 7% for the first five years and from 0% to 5.5% for the second five years.

On reflection, I underestimated the difficulties and disadvantages of imposing a uniform X value on several different companies, and indeed of setting an X value not related to rate of return. My focus, with Beesley, was on maximising the incentives on companies to perform, on the ground that this would be in the long-term interest of customers generally. We were not then envisaging differential initial adjustments to their price levels, nor were we attuned to the more immediate concerns of customers -- and especially the media -- about the profits of the privatised utilities. That experience was soon to come.

## 4. Privatising the electricity industry

Electricity was next for privatisation. This was a more complex industry, with three main nationalised components: the 12 Area Boards (now renamed Regional Electricity Boards or RECs) in England and Wales, each with a monopoly of distribution and retail supply in its own geographical area; the Central Electricity Generating Board (CEGB), which was responsible for all generation and transmission in England and Wales; and the two vertically integrated Boards in the north and south of Scotland, which were renamed as Scottish Hydro-Electric (SHE) and Scottish Power.

Alan Walters suggested to Cecil Parkinson, the new Secretary of State for Energy, that he appoint me as economic adviser. I successfully argued for retail competition, and for separate price controls for each REC's distribution network and retail supply business.[23] In 1989 Parkinson appointed me as electricity regulator: Director General of Electricity Supply (DGES) and Head of the new Office of Electricity Regulation (OFFER). I set about appointing senior staff (including Professor Beesley as OFFER's economic adviser) and played no further part in the Government's setting of the initial price caps.

The 12 REC distribution networks were not expected to be subject to competition. The Government was persuaded that they needed to increase their charges to finance major investment programmes -- in order to refurbish their distribution systems -- and it wanted to make privatisation a success, with profitable companies that would be attractive to investors. Consequently, these REC distribution businesses were given RPI+X price caps for the five years to 31 March 1995, with the X values ranging from zero to plus 2.5% per year. The main focus of the present paper is my later resetting of these price caps.

The RECs also had other price caps on their electricity supply businesses.[24] In total the Government set 43 initial electricity price caps on the various generation, transmission,

[23] I also suggested that with retail competition there would be no need to regulate or even license new entrants into retail supply but was advised that the Secretary of State might actually like to license retail suppliers.

[24] The 12 REC retail supply businesses were each given a four-year overall RPI-X+Y price cap, where Y was to pass-through electricity purchase and delivery costs, with X set equal to zero until March 1994. This overall price cap covered all customers and had no explicit end-date. There was also a subsidiary cap for customers taking less than 1 MW maximum demand, which had no X value or pass-through and obtained for three years. Retail

distribution and retail supply businesses, all set out in the Prospectus for the sale of the RECs. As with the other privatisations, there were many different approaches to setting X, which reflected extensive, time-consuming, and often difficult negotiations among the Treasury, sponsor departments, and companies. But virtually none of this was public knowledge until a quarter of a century later, when the fascinating accounts by Parker (2009, 2012) revealed that initially setting X was not "simpler, less expensive and interventionary" than was rate-of-return regulation, as I had assumed in 1983 and 1986.

## 5. Resetting RPI-X price caps: precedents in other sectors

How did other regulators later reset the initial price caps that were set by Government at flotation? The telecoms regulator Oftel, facing a concern about rising profits, had reviewed BT's price control after its first and second years. It did not carry out a full review of the price control in the third year "because BT voluntarily decided that it would freeze the prices for its main network services, even though the price control formula would have permitted an increase in average prices of a little over 1.2%" (Oftel 1988, para. 5, p. 2). BT's profits were relatively high at the end of its first period, but rather than make an initial price cut, Oftel (1988) suggested that "if the aim of regulation is to replicate the pressures of a competitive market, it [the price cap] should eliminate high profits over a period of a few years at most" (para. 54, p. 8). So Oftel started the level of BT's new cap from where the previous cap finished, somewhat increased the coverage of the control and increased the value of X from 3 to 4.5, without explaining precisely how X was set. Bryan Carsberg, the telecom regulator, told me he chose X so that BT's predicted return on capital would equal its cost of capital at the end of the next price control period.

In 1991 Ofgas concluded that current cost returns in the range 5-7% were appropriate and attainable if British Gas achieved the productivity targets that Ofgas assumed. James McKinnon, the gas regulator, told me that his aim in resetting X was to make the company agonize between accepting and rejecting, since this is what effective competition would do. He toughened the price cap from RPI-2 to RPI-5, though an MMC report in 1993 eased X to 4.

Later, in resetting the water company price caps broadly in parallel with the electricity distribution caps, Ofwat (1994), like Oftel and Ofgas, started the new cap from where the previous one ended; and, like Oftel, Ofwat adopted what it called a "glide path" approach. It "set price limits on the expectation that real returns for most companies would fall [from around 13%], over the 10 years covered by the new price limits, to a range of 6 to 7% after corporation tax" (Ofwat 1994 p 52).

## 6. Resetting the initial transmission price controls

National Grid Company (NGC) was jointly owned by the 12 RECs because it was not clear that it could be privatised separately. It had an initial three-year RPI-0 price cap; this was the first of the electricity privatisation price controls to expire. In February 1992 we asked NGC to

competition was to be phased in: for Large business customers in 1990; for Medium business customers in 1994; and for Small business and Domestic (residential) customers in 1998.

provide its business plan for future years: including estimated opex, capex and income, and its views on the appropriate methodology for setting X. We appointed consultants to assess its business plan.

Our proposed new control tightened the price control from RPI-0 to RPI-3, for four instead of three years. Our statement on it was brief (five pages); and the description of how X was set was only about one page. We assumed more challenging opex reductions (5% per year) than in NGC's business plan (3%), and suggested scope to reduce capex. We explored alternative assumptions and checked various financial ratios.

But several such ratios were less relevant since NGC was not a quoted company. Although not stated explicitly, we focused on return-on-capital-employed. X was basically calculated so that return-on-capital-employed during the forthcoming period was equal to the cost of capital; equivalently, the Net Present Value (NPV) of revenue over the next four years was equal to the NPV of estimated future costs (opex plus depreciation and return on capital on existing and new capex). I wonder now if this was the first time that this simple price – equal - cost approach was so central in the setting of X. [25]

There was little public reaction: NGC did not supply a service directly to the public, and since it was not listed on the stock exchange there was no share price to indicate performance or to suggest excessive (or inadequate) profit and raise public concern.[26]

In September 1993 we tightened the price control on the transmission business of Scottish Hydro-Electric (SHE) from RPI-0.5 to RPI-1.5 but left Scottish Power's transmission price control at RPI-1. These transmission businesses were only a small part of their overall business activities; again, there was little explanation[27] and no company resistance or public concern. Resetting RPI-X controls didn't seem difficult.

## 7. Pressure to bring forward the electricity distribution price control review

Resetting the REC price controls was a different matter: The RECs were public-facing monopolies and in the public eye. New retail supply price controls were due on 1 April 1994,

[25] Though again we did not spell this out, it was actually a little more complicated. As explained in section 9 below, we had reservations about relying on the companies' Historic Cost Accounting (HCA) and Current Cost Accounting (CCA) figures. We also thought it prudent to use an estimate of the real pre-tax cost of capital (about 7%) instead of the CCA return at privatisation (about 5.5%). So we applied the 7% cost of capital to a reduced value of NGC initial assets (multiplied by about 5.5/7) (Andrew Walker, pc 5 Dec 2023).

[26] "The change was greeted with relief in the City after predictions of a much more onerous regime" (*Independent*, 8 Jul 1992) and "The cap fits with National Grid" (*Telegraph,* 8 Jul 1992).

[27] We did explain that "The present [initial] price controls were set on the basis that assets in the businesses at Vesting [privatisation] might appropriately earn a 6 per cent rate of return on CCA net book value", consistent with a recent MMC report on British Gas (OFFER 1993a p ii). We also said that "At flotation the book value of assets was close to the market value of the shares in the companies" (p 13), so there was no need to scale down initial asset value as we had done for NGC. We noted that we didn't use the companies' (upward) revaluation of their assets.

and the more significant new distribution business controls were due on 1 April 1995. We had a clear timetable for the latter, starting in October 1993.[28]

However, there was considerable media pressure to act well before that. In early 1991, only two months after flotation, it was reported that "Electricity companies are planning to raise their prices by up to 13% from April 1" (*Sunday Times* 17 Feb 1991).[29] The Shadow Energy Secretary (spokesman of the main opposition party in Parliament) said simply "This is a rip-off" (*Western Mail* 18 Feb 1991).

The Department of Energy tried to discourage the RECs from increasing prices unduly and suggested to me that "a growly letter would be helpful". Unfortunately, the licenses allowed the RECs to make their own forecasts of inflation. Nonetheless, on 20 February I warned the RECs that price increases of the reported 13% would not be consistent with their price caps. This had limited effect.[30] But soon the RECs were announcing provocative profit increases.[31]

In March 1992, the Energy Select Committee in Parliament "demands that the industry regulator, OFFER, review the price controls on the regional electricity supply companies earlier than the planned date of 1995, in view of the high profits the companies make" (*Independent*, 10 Mar 1992). Others echoed this call for intervention and began to criticise me as regulator.[32]

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[28] Consistent with previous regulatory practice in this and other sectors, our plan was to open an initial public consultation in October 1993, invite comments by the end of December 1993, engage in confidential discussions with the companies, then publish proposals in summer 1994. That would just allow time for a six-month reference to the MMC if any company rejected the proposals, in which case the MMC would consider the whole of the control, make recommendations, and empower us to impose an appropriate new price control on that company before 1 April 1995. This brisk non-legal appeal process, which could in principle leave the appellant company worse off, stood in contrast to the legal process for US utilities -- which, as we understood, could appeal on particular chosen issues, could in practice drag out proceedings, and if they didn't like the outcome could appeal against the appeal decision.

[29] This was "to recover 'lost' profits from last year, when prices were fixed too low because the government underestimated the rise in inflation". The Treasury had been unwilling to countenance an inflation forecast above 6% and had said there would not be real price increases. However, it had set the price controls so as to allow increases in line with actual inflation, which turned out to be 10.9%, with the result that actual prices and revenues were about 5% above what had been intended and promised.

[30] "Regional electricity companies have ignored government appeals to keep down prices before the general election" and instead had announced price rises averaging 10.5%, just a little less than the earlier media forecast of 13% (*Times*, 29 Mar 1991).

[31] East Midlands reported "a pre-tax [profit] figure of £119.1m, 31% ahead of prospectus forecasts. The company is unlikely to be alone in outstripping its prospectus predictions" (*Independent*, 20 June 1991). There was "Anger at big jump in power profits" *Daily Express* (20 June 1991).

[32] Labour's energy spokesman said "Never in the field of public utilities have so many made such enormous profits for doing so little" (*Financial Times*, 16 June 1992). "The chairmen of electricity consumer committees [all of whom I had recommended for appointment] added their weight to the calls for tighter price controls and said they were 'greatly concerned' about the forecast level of profit increases. They said: 'We regard them as grossly excessive and indicating that prices charged to consumers had been too high by a significant amount.' The Consumers' Association urged Prof Littlechild to follow Sir James McKinnon, the British Gas regulator, in forcing price cuts" (*Telegraph*, 16 June 1992). "If Professor Littlechild lacks the legal powers to enforce sensible charges on the electricity companies, he can at least use moral suasion" (*Times*, 17 June 1992). "It is time the watchdog started to bite rather than just yap. He should follow the lead of the gas regulator and force price cuts" (*Daily Express*, 17 June 1992). And, under the boldface heading **Poodle power,** "In all the former state concerns, we desperately need watchdogs that not only bark but bite. **In the prof's case we seem to have an animal about as fierce as a stuffed poodle"** (*Sun,* 17 June 1992).

Part of this was unfortunate timing: The gas regulator Ofgas had just tightened British Gas's original 1986 RPI-X price control from RPI-2 to RPI-5, but that was at the scheduled review.

I considered exploring something similar to the Oftel/BT voluntary price freeze, but rejected it for several reasons, including the likely disincentive effect on efficiency and a distaste for implicit arm-twisting and covert deals. Also, I had doubts about getting voluntary and mutually acceptable price freezes out of a dozen electricity distribution companies that had different financial situations and different RPI+X caps (allowing different real price increases). They were actively vying with each other to impress investors in terms of financial performance rather than price to customers. With inflation then around 5%, even if price freezes were not an issue for London Electricity with an X of 0, what about Manweb and South Wales that were entitled to raise prices by RPI+2.5% per year?

And suppose even just one company declined to agree to a voluntary price freeze. Either I would have had to accept that, thereby seeming to demonstrate the toothlessness of regulation or of this regulator. Or I would have had to make a formal proposal to impose a tighter price control on that company and refer it to the MMC if it refused -- thereby effectively ripping up the RPI+X price-cap assurances that had effectively been given to investors at flotation just a couple of years earlier.

In January 1993 the Trade and Industry Committee called for more Government and parliamentary control over energy regulators and said I should begin my review of REC distribution charges immediately. Reportedly, MPs were calling for "a shift to rate-of-return regulation on the American model" (*Times* 30 Jan 1993).

But the UK had embarked on a different approach. If the initial proponent of RPI-X incentive regulation were to reopen the price control before the end of the defined period, it would surely undermine that approach, as I sought to explain to critics.[33]

## 8. Revisions to the electricity retail supply price controls

The REC retail supply price controls -- which were distinct from the price caps on their distribution business charges -- were now due for renewal. In July 1993 I reduced their scope to focus them on so-called franchise customers: those who were not yet eligible for competitive supply (that is, residential customers and small business customers with maximum demand under 100 kW). I tightened them from RPI-0+Y to RPI-2+Y, with effect from April 1994. (Y was the pass-through element for power purchase and delivery costs.) The REC retail supply

[33]For example, at an autumn 1993 conference, Dieter Helm commented: "Unlike many of the other regulators, he [Littlechild] has doggedly stuck to his principles, as the recession bit deeply and as the profits and returns to REC shareholders have greatly increased. …[However], it is very hard to imagine that, if the Director General had lowered prices during the first period, RECs would have given up their drive for operating efficiency. … If anything the failure to intervene has allowed a more leisurely approach to cost-cutting" (Helm 1994 pp 101-2). I restated my view: to intervene "at an early stage one would have been calling into question the whole regulatory regime". This would have increased the cost of capital and outweighed the short-term price reductions, and enabled companies to argue for price increases if costs increased (Littlechild 1994a pp 112-3).

markets were potentially competitive, with minimal assets, and I saw the price caps as temporary until the franchises were lifted (allowing retail competition) in 1998.

The media reported initially that the RECs were "bracing themselves for an assault … Watchdog to shock the discos [distribution companies]" forecast the *Daily Mail* (9 Jul 1993). The next day there was a feeling that I had been too lenient.[34] But I didn't wish to suppress the price in what would soon be a competitive market.

### 9. How to reset the next distribution price controls?

The OFFER consultation paper on the distribution price control review was due in October 1993. An RPI-X price cap would surely be preferable to rate-of-return control; but I felt that there would need to be a more explicit basis for proposing potentially different X values for 12 different electricity distribution companies than Government, the MMC and other regulators had previously used for the single company controls.[35]

As before, X should provide sufficient revenue to cover: i) efficient operating expenses; ii) depreciation of initial and subsequent assets; and iii) a return on the (undepreciated) value of initial and subsequent assets.[36] But how precisely to make these calculations?

Oftel had used Historic Cost Accounting (HCA) asset values, while Ofgas and Ofwat used Current Cost Accounting (CCA) values, but Ofwat was intending to base its opening asset values on flotation values. The electricity companies published both HCA and CCA accounts; but I felt uncomfortable about making the price controls too dependent on companies' financial accounts of either kind and had several questions and concerns.[37]

[34] "Electricity companies escape harsh controls … The regional electricity companies breathed a sigh of relief yesterday after new price controls imposed by the industry regulator turned out to be less stringent than feared (*Independent*, 10 July 1993). Indeed, "Power shares jumped" (*Daily Telegraph* 10 July 1993), and "Electricity companies greet review of profits with relief" (*Times*, 10 Jul 1993). The Labour [Opposition party] energy spokesman said "Tougher regulation is needed. Shareholders have profited from privatisation at the expense of consumers" (*Guardian*, 10 July 1993).

[35] I now think of this previous approach as the "Goldilocks approach": examining various financial ratios and deciding that this value of X is too high, this one is too low, and this one is just right.

[36] As my colleague now observes, our approach was more focused on one of the financial ratios (ROCE/NPV) with the wider set of financial metrics used as a cross check. "More extensive financial modelling requires difficult assumptions on financial structure and dividends and the various metrics tend only to provide indications of overall financeability rather than a clear approach to calibrating a price control (particularly where there are multiple companies) and nor does it provide a clear approach to remunerating ongoing capital expenditure. As far as I am aware none of the utility regulators in the UK or the CMA [Competition and Markets Authority, the successor to the MMC] have gone back to using a broader Goldilocks approach. I also note it is very easy for a broader Goldilocks approach to lead to relatively generous price controls for companies, as there are always one or two metrics that look more difficult than the others, and the controls set by the Government before privatisation were probably good examples of this." (Andrew Walker, pc 6 Dec 2023)

[37] US electricity regulation based on historic costs had been criticised, and more forward-looking concepts based on Long Run Incremental Cost (LRIC) were then under discussion in US telecommunications regulation. Could we simply accept the HCA depreciation policies that the companies had chosen, or the CCA valuations they had put on their assets? Did either HCA or CCA costs (and in particular depreciation) properly reflect forward-looking economic costs? And whereas Ofwat had required the water companies to establish separate regulatory accounts, which had to be approved by Ofwat, this was not something that I had deemed necessary, practicable, or appropriate in electricity. So did the 12 electricity companies even follow mutually consistent accounting policies?

We actively debated the issue within OFFER. Three approaches emerged. The first was to use the companies' CCA accounts. We had used modified or actual CCA values in resetting the price caps for NGC and the two Scottish transmission businesses. The companies themselves argued strongly for a CCA approach and resisted any reduction to reflect flotation value.

The second and novel approach, proposed (invented) by Professor Beesley, was to estimate what value of X would yield a revenue flow to allow each company to maintain its flotation share price, with a reasonable growth in its dividend, assuming it met the cost efficiency target that we set for it.

The third approach, developed by Geoff Horton, was "designed as a bridge between cash flow and accounting-based approaches". To meet my concerns about accounting depreciation it used the term 'return *of* investment' instead of 'depreciation'. But it could be characterised as return *on* investment (flotation value of initial assets plus assumed subsequent investment, both less depreciation, multiplied by cost of capital), plus depreciation plus cash operating costs.

We didn't resolve the choice between approaches by the time we had to publish the consultation paper. However, another important issue needed attention.

I had resisted making earlier interventions to reduce electricity prices, and the companies were now earning much higher profits than forecast. In consequence, the Oftel/Ofwat approach of setting X such that price followed a glide-path to efficient cost at the *end* of the next five-year period would allow continued excess profits at the *beginning* of that period. But if we set X to equate NPV of revenue and efficient cost *across* the period -- as we had done with National Grid and the Scottish transmission companies -- the excessive profits at the beginning of the period would imply insufficient profits or significant losses by the end of it.

To avoid this we would need to consider how to sculpt revenue over the period. One possibility was an initial price reduction – which we later called a Po reduction (after the term that was used in the company licenses and Geoff's spreadsheet) -- followed by a lower X value.

## 10. The distribution price control review gets underway

OFFER's October 1993 consultation paper explained the background and issues that were involved.[38] Initial flotation values of the companies could be a more appropriate measure of the initial value of assets than CCA values. A rather abstract description of price setting allowed us flexibility to use any of our three approaches but indicated that, overall, X could be set such that price was broadly *equal* to, rather than *declining* to, efficient cost.[39] This was a change

[38] Apart from the price control itself, these issues included metering, excluded services (those for which the businesses charged separately), connection charges and standing charges (charges per day independent of electricity used), quality of supply, standards of performance, meter reading, debt and disconnection, services for the elderly and disabled, and promoting energy efficiency (OFFER 1993b).

[39] X would be calculated such that the NPV of revenues over the next price control period would be equal to the NPV of costs, "defined as the opening asset value, plus the discounted stream of expenditure on investment and operating costs, less the discounted value of assets at the close of the period…. For different assumptions about the precise form of the control, … it is possible to determine combinations of the base prices in the price control and the X values which will generate a given present value of revenue" (OFFER 1993b, p. 41).

from previous UK practice but I didn't think that it amounted to adopting US cost-of-service regulation.[40]

Separately, we asked all of the companies to provide (in confidence) information about costs and other items, and their business plans for the forthcoming period. We appointed consultants to analyse these data, including to check whether investment that was provided for at privatisation had been carried out and to assess whether future investment plans were justified. They were also to compare operating costs using process benchmarking, using statistical and econometric analysis to establish best practice and identify potential efficiency gains. Another consultant developed full financial models of the RECs.

Such analytic measures are of course commonplace now, but they were novel at the time. In retrospect, no one - even the companies themselves - knew what efficiency gains were available, and the range of forecasts was larger than would be the case now.

The consultation paper invited comments by the end of December 1993, with a view to further analysis and discussion, and then publishing proposals in the summer of 1994: a total of about ten months. This would allow six months if needed for any company to appeal the proposals to the MMC, which could then make recommendations to impose an appropriate control. The new control would take effect from 1 April 1995.

Ten months to make the basic price control proposal, with another six months to resolve any appeal, seemed a proportionate timetable for a five-year control. Setting price controls was not then intended to be a full-time activity. Our 43 initial price controls and a rolling programme of reviews militated against giving much more than a year's effort to any one set.

Moreover, there were many other important regulatory issues to deal with in the process of transforming a nationalised monopolised industry into a competitive market.[41] One of the potential attractions of the RPI-X approach was to avoid the potentially lengthy and drawn-out tussles of the legalistic US approach. But that expectation has generally not been fulfilled.[42]

There was not much media reaction to the consultation paper. But share prices fell later when one perceptive commentator picked up that I now had "two main options: an RPI-X formula

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[40] For example, as explained below, we used projected efficient costs rather than actual costs in previous "test years", and we did not envisage reopening the price control if outturn costs or profits were different from expected.

[41] For example -- to take just the two years 1993 and 1994 -- OFFER reports included Review of Economic Purchasing Further Statement (February 1993), Statement on Independent Assessor's Report on Plant Closures (March 1993), Pool Price Statement (July 1993), Retail Activities of the RECs (November 1993), Decision on a Monopolies and Mergers Commission Reference (February 1994) which provided for voluntary divestment by the generation 'duopoly', Report on Trading Outside the Pool (July 1994), Submission to the Nuclear Review (October 1994), First Scottish Renewables Order (November 1994), and Third Renewables Order for England and Wales (November (1994). Other ongoing issues included: the extension of retail competition in 1994; the implications of coal privatisation; and the flotation of NGC.

[42] As of January 2021, Ofwat's price control for the period 2020-2025 was still not finalised and discussions on the 2025-30 Ofwat price control had already been underway for some months. Cave (2024, p. 7), citing Ofgem, says that "Regulatory engagement for RIIO2 took at least 5 years." Setting price controls became a more-or-less full-time regulatory activity.

that bites steadily or a big one-off cut followed by a more gradual reduction".[43] Rumours continued, and in April 1994 one financial analyst suggested that a severe price cut was likely.[44]

### 11. Internal debates and a challenge to the companies

Meanwhile we were still debating what approach to use for the price control generally. The CCA approach was relatively straightforward: we had used variants of it in resetting the NGC and Scottish transmission controls. But we would need to adjust it (as we had done for NGC) because REC flotation values were much lower than CCA values (about 60%), and we were also concerned about possible variations among the 12 companies' CCA practices.

Geoff Horton briefly appraised the three approaches and calculated what each would mean for the RECs as a whole in terms of allowed revenue under the price control, for assumed financial ratios. The resulting variation in NPV was startling: "the relative expense of the three options depends on the parameters used but at 2% dividend growth, cover of 1.7, 6% cost of capital (and CCA return) and the 80% MAR [Market to Asset Ratio] I claim to be equivalent to 2% growth, CCA has an NPV in March 1995 of £1.8bn, Beesley £2.75bn and Horton £0.5bn" (18 April 1994).

Instinctively, we had thought the companies' preference for CCA would be generous to them, but it now seemed that the Beesley approach might give them half as much revenue again. In contrast, the Horton approach implied not much more than a quarter of the CCA revenue. These were significant differences and made the choice of approach even more critical.

Unfortunately, I have no further internal correspondence at this point. It seems that there was a relatively simple reason for the big differences in NPV between the Horton and Beesley approaches, and we could have made adjustments, albeit not straightforward ones. [45]

However, we now had to respond to the cost information that the companies had provided. Much of this was helpful and plausible, such as the actual audited costs and investment expenditures for the years up to 1992/93 and estimates for 1993/94 and 1994/95 to which we had not previously had access and which we had no reason to doubt. But we were concerned at what seemed to be the high level of their opex and capex projections for the forthcoming

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[43] She remarked that "he [Littlechild] cannot afford to exacerbate his public image as the least aggressive of the regulators. He may therefore be driven to assert himself with a touch of shock treatment for the RECs" (Helen Kay, *Independent On Sunday*, 5 December 1993).

[44] "… electricity price falls were triggered by a forecast from John Wilson, electricity analyst at UBS, the securities house, that Littlechild would impose a one-off cut of 21% in distribution prices, followed by annual cuts of 4% in real terms. 'The regulatory noose will tighten,' Wilson forecast. '…Historical performance has been astonishing', says Wilson. At the time of privatisation, analysts believed earnings and dividends would grow at about 4% a year in real terms. In fact, earnings growth for the first year was 64%, and dividend growth has been more than 12% a year in real terms" ("Watchdogs that didn't bite", *Sunday Times*, Business Focus, 10 April 1994, p. 3).

[45] "Geoff explains that the distribution companies were making projections of significantly higher levels of capital expenditure and with the Horton method most of this was financed by increases in the RAB rather than revenue during the 5-year period. As the Beesley method focused only on cash flow there was no RAB to help smooth increases in capex so prices would be higher – and with big increases in capex this could be by as much as £2 billion higher in a 5-year period. My recollection is that Michael Beesley's response to this was that we should look at cash flow over the long term and then decide how to apportion this to price control periods. But this raised a number of difficult issues" (Andrew Walker pc 19 Jun 2024).

period 1995-2000. On the basis of our calculations, their assumptions implied that, on average, X would be zero over the next five years, with no initial price reduction.

Precisely what X should be could not easily be calculated, because (unlike in US cost-of-service regulation) the price control parameters did not depend upon "facts" or "data" about a past "test year", but upon regulatory judgements as to what it would be reasonable for companies to achieve over the next five years. At that time, there was little empirical evidence about how companies could or did respond to incentive-price-control challenges.

A regulator seemed on relatively strong ground in arguing that other companies ought to be able to do about as well in the forthcoming period as some more efficient companies had achieved in the previous period, after allowing for differences in any relevant factors. But the regulator would be on much less strong ground in arguing that all or most companies could do better than any company had been able to do hitherto.

Nonetheless, the RECs could surely do better than they now proposed, and they knew it. This was just their opening gambit. If we had to chisel away at each of their assumptions separately, we would be worn down, always on the back foot, trying to prove that they (who we assumed knew their own businesses better than we did) could do better than they claimed. So I asked Geoff Horton to put together a set of initial assumptions for the price control that embodied the lowest conceivable value for each element of cost and investment.

I knew full well that we could not justify all those values. Rather, it was what I took to be a conventional negotiating tactic: Henceforth it was as much the companies' job to persuade me as my job to challenge them. Hopefully, we could meet somewhere in the middle on a level of price control that would well protect customers and that companies could justify to their shareholders as manageable.

### 12. The 20 April 1994 letter

On 20 April 1994 we sent our initial cost assumptions to the companies, in confidence as was then the norm. These seem to have shocked the companies, and not surprisingly. The existing 1990-95 control had an average X (over all 12 companies) of 1.3% price increase per year, ranging from zero to 2.5%. The costs that the companies themselves had recently proposed implied (using the NPV revenue = NPV cost principle in the October 1993 consultation paper) no initial price reduction (or increase), and X ranging between plus and minus 4% over the next five years with an average X (across companies) of zero.

In contrast, the cost assumptions that we sent to the companies on 20 April implied initial Po price reductions that ranged from 24% to 40% (average 31%), followed by an annual price reduction of X equal to 3%. Alternatively, with no initial price reductions, our assumptions implied an average annual price reduction (over all companies) of X equal to 13% per year, ranging from just over 10% to just under 15%.

No wonder the companies were stunned. They were expecting the RPI-X review to yield price reductions henceforth, but not of around 10% to 15% *per year*. Of course, there was no realistic prospect of this because we could not credibly argue that the companies could reduce costs at

the rates that were postulated in our 20 April letter, and we would need to take account of relevant financial ratios that were not noted there. But the aim of the letter was to put the onus on the companies to persuade us of what might be more reasonable assumptions.

This worked, in the sense that we did indeed have some robust but productive discussions, and the companies came to accept more reasonable assumptions, and we too modified our position. However, I had not bargained on one eventuality.

Our discussions and exchanges with the companies were confidential. Unlike today, developments in the regulator's thinking and assumptions, and the companies' responses, were not made public. Oftel and Ofgas had considered that publication would not be conducive to frank and constructive discussion. What I should have realised -- but didn't -- is that while there is no great difficulty in prohibiting leaks if a single company receives a confidential document, it is impossible to trace the culprit if 12 companies have the same or similar documents.

One (at least) of the electricity companies leaked to the media information from my confidential 20 April letter. And speculation about the proposed price control was rife.[46] In fact, our 20 April proposals were slightly tougher than these conjectures, but what was leaked was considerably more severe than the market had been expecting, so share prices fell. Moreover, the rumoured controls were more severe than the controls that I envisaged eventually setting.

The serious adverse effects of the leak became apparent only over time. A reprimand to the companies avoided further leaks. However, that in turn meant that subsequent movements in our regulatory position -- and the likely price control outcomes -- were not conveyed to the stock market. Consequently, the stock market and investors, unfamiliar with this sector, continued to be ill-informed -- and unduly pessimistic -- on this particular and critical issue.

## 13. Decision time onprice control approach: the three options

We continued with further calculations and analyses.. We were getting to (perhaps past) the point where we (actually, where I) needed to choose between the three approaches we had identified.

On 17 May Geoff Horton produced a summary of the three main options and of views thereon. In brief, the companies argued for a profit stream of 6.5% on CCA value of assets, and we had implicitly accepted the use of (variants of) CCA in resetting the transmission price controls. But I and other economics colleagues were not keen on CCA.[47] The Beesley approach involved calculating what revenue flow and hence dividend stream would enable an efficient company to maintain a reasonable dividend growth. But how to estimate this? And was subsequent

[46] The *Evening Standard* newspaper on Friday 22 April wrote that the regulator envisaged a price control with an initial cut of 12% to 15% with an X value of minus 2% per year thereafter. The *Daily Mail* headlined "Littlechild thunderbolt delivers electric shock" (23 April 1994, p. 69) although the *Daily Telegraph* said that "Mr Littlechild's action is nothing more than a reasonable redress of the balance of interests between shareholders and customers" (23 April 1994, p. B3). The Sunday and Monday newspapers toughened the rumour to an initial cut of 20% and an X value of minus 4% a year, and these higher figures were generally cited thereafter.

[47] As Geoff put it, they/we felt "the 6.5% return on CCA assets was not put as an offer to shareholders and CCA assets are dangerous things, subject to revision by the companies almost at will".

investment part of the deal at flotation, or should it be remunerated additionally? The Horton approach Geoff now likened to an annuity: It involved a return on the initial investment, as measured by flotation value, and on subsequent investment.

CCA was coherent; but I didn't like it because it left us at the mercy of the companies' accounting policies. And I wanted to base initial asset values on flotation values ("what the punters paid"). The Beesley approach was imaginative but seemed too dependent upon our assessments of shareholders' thinking to be able to defend against a dozen sceptical/hostile companies -- and then potentially the MMC. Also, I didn't fully understand it, and therefore couldn't explain it to the world. The Horton approach looked manageable, could be debated with the companies, and accommodated my concern about depreciation. I thought I could understand it, and make it understandable to a wider audience, so that was the one that I chose.[48]

With the general approach now decided in principle, the internal price control process moved on to the specific numbers. Initial asset value was, I believe, based on the average share price over the first 100 days. We also explored various arguments in the financial literature for uprating the flotation value of assets -- otherwise the Horton approach might not adequately remunerate initial investors for the risks that they had taken or might imply inadequate financial ratios. In fact, flotation value was so far below the CCA value that the companies argued for, that any proposal based on it might well be rejected out of hand by all the companies, and on appeal might well not be sustained by the MMC.

### 14. The 24 June 1994 "presently minded" letter

Discussions with companies continued -- always on a confidential one-to-one basis to allow free expression and enable unrestricted discussion of each company's data. It was important to establish not only the efficient levels of cost, but also what factors determined costs, and hence how far observed cost differences were attributable to efficiency differences or to differences in (e.g.) population density or climate. Each company fought its own corner vigorously -- often with theoretical, empirical, and comparative evidence.[49]

Companies were also keen to challenge the arguments that were put forward by some other companies. Evidently, relative positioning was important to them. But they wouldn't challenge other companies face-to-face.[50]

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[48] Geoff Horton deserves credit for his substantial contribution to what later became known as the Regulatory Asset Base (RAB) or 'building block' model. Our October 1993 Consultation Paper was probably its first appearance -- at least in abbreviated qualitative form. In 1995 the MMC spelled it out numerically in its determination of SHE's appeal, as will be explained below. In 1998 Ofwat adopted a similar building block approach in its second price control review and was thereby able to make initial Po reductions in prices, which its 1993 review had not done. A building block approach was used extensively by later regulators in electricity and other sectors in the UK, Australia, and elsewhere.

[49] This included cross-industry regressions that showed why, after taking account of relevant features -- such as climate and topography -- that company was among the most efficient in the sector. Given the small number of data observations, companies could choose independent variables to show their own company in a good light. Geoff Horton recalls that one company chose criminal convictions per head as one of three explanatory variables.

[50] At one stage I gathered all of the companies together to discuss the determinants of costs. They could each advance their own arguments and rebut the challenges of the other companies. But no one would speak. Not a single company would advance its own view or challenge any other. After 10 minutes I abandoned the meeting.

Within a few months of the 20 April letter, the responses gave us enough information to make a preliminary judgement as to what would be a reasonable price control. The aim was a draft proposal that was in the right "ball-park" -- subject to a little fine tuning in the light of final company responses.

Consequently, on 24 June 1994 we sent out another letter to the companies – the "presently minded letter" -- with more realistic cost and other assumptions than in the leaked 20 April letter. These assumptions were seen to take on board several of the points that the companies had argued to us. I think that this must also have been when we accepted that we needed to increase the allowed revenues to satisfy reasonable financial ratios, and to move towards company expectations, and that we could do this by uprating the flotation value of assets by about 50%, primarily to reflect a fall in the cost of capital, as will be further discussed in the next section.

This 24 June proposal implied lower initial Po price reductions and a subsequent X value of 2% rather than 3%. Alternatively, if Po reductions were zero, the controls we now proposed were equivalent to an average X value throughout the period of just under 8%. This compared to the companies' business plan assumptions that had average X about 0% and our 20 April assumptions that had average X nearly 13%. So, they marked a considerable movement in our position -- to what we considered would be a reasonable control, subject to a little fine tuning.

We met with each of the companies for final discussions. Most companies continued to argue for further relaxation of their own control. In contrast, Southern Electric -- one of the two leading companies -- agreed that we had modified our position sufficiently for its own company and argued that we should tighten the proposed controls for other less efficient companies.

Jim Smith, chairman/CEO of Eastern Electricity -- perhaps the leading distribution company at the time -- proposed that we now agree on a price control with his company rather than go through to the end of the formal procedure. It would be in the interest of his company to be able to demonstrate to shareholders that it had reached agreement with the regulator and had a price control that it could manage. As one of the most efficient companies, it could agree to a tough price control, and other companies would be forced to fall into line.

This was an unexpected but interesting idea. However, I felt that it would be inappropriate suddenly to negotiate separately with one company when the general understanding had been that all 12 companies would be treated comparably, according to a specified process.[51]

### 15. Outline proposals 11 August 1994

[51] At the time, I was unaware of the negotiated settlements approach used in parts of the US, and UK customer groups had not been actively involved in the price-control discussions. I now believe that there is great merit in a company agreeing to a price control with its customers and other interested parties and then proposing this to the regulator. In later price-control reviews, Ofgem and Ofwat offered a fast-track approval process for particularly high-quality business plans that reflected good engagement with customers. This seems to formalise (with appropriate safeguards) a similar approach as Eastern Electricity put to me. It shows that companies, customers, and regulators see potential benefit in a cooperative rather than confrontational approach -- provided of course that the interests of all parties can be appropriately protected. I expand on this in the penultimate section 33 below.

The companies responded to our 24 June proposals, and we made final judgements and slight modifications. On 11 August 1994, on schedule, we published the outline price control proposals (OFFER 1994). The detailed licence modifications and the precise wording that was necessary to implement them remained to be specified, and they were subject to any further relevant information coming to light.

The proposals noted that controllable opex had been reduced and could be further reduced by about 3% per year. Actual capex had been lower than projected at flotation. Companies' future capex programmes would be acceptable subject to reductions that ranged up to 25%. The cost of capital was assumed to be around 7% pre-tax.

Existing assets were valued at flotation value net of the estimated values of other businesses such as retail supply and appliance retailing, and net of the shareholdings in NGC. We accepted that "some further adjustment to the flotation value is appropriate … to take into account initial expectations of dividend growth which (other things being equal) would imply a rise over time in a company's share value … and any change in the cost of capital from which investors at flotation might expect to benefit" (para. 5.64). "To reflect these elements, I based calculations on the flotation value increased by 50% for each company, plus net investment since flotation. The resulting valuations vary across companies but on average are around 90% of CCA asset value…" (para. 5.65).[52]

We noted that "The precise positions of companies relative to each other are quite sensitive to the particular assumptions in the calculations. … The companies also argued strongly to me that not only their absolute positions but also their relative positions, one to another, were important" (para. 6.18).

Our analysis of costs indicated that the 12 electricity companies could be put into three broad bands. I considered that it would be prudent to band the companies in this way because setting a different and more precise number for each company might put more weight on our model and calculations than they could bear. I also thought that, if a company was in a band with other companies, it was less likely to challenge its proposed price cap than if it were singled out as different from the others.

So, the price control proposals were for initial Po price reductions of 11% for three companies, 14% for six companies and 17% for the remaining three companies. After these initial price reductions, they all had an RPI-X control, with an X value of 2%, for the next four years.[53]

Given that X might seem low at 2%, the proposals paper pointed out that, if the Po changes were zero these controls were equivalent, in present value terms, to five-year X values of about

[52] A later summary gives slightly further detail: "After the first day's trading [after flotation] the yield (on expected dividends) [a proxy for cost of capital] was about 7.3 per cent whereas by the summer of 1994 it had fallen by one third to 4.8 per cent. A reduction of one third in the cost of capital would need an uprate of 50 per cent in the asset base to yield the same earnings stream" (OFFER 1995, para. 11.11, pp. 15-16).

[53] Why had there not been scope for similar immediate Po price cuts for NGC? "The RECs had soft initial price controls and in general underspent their capex allowances. In contrast the first NGC review was not long after privatisation and so there was less information on capex and opex efficiency gains etc. Also, NGC's initial price control did not allow for real increases in prices" (Andrew Walker, pc 5 Dec 2023).

5½%, 6½%, and 7½%, respectively. On average, the equivalent five-year annual reduction was now 6.56% -- as compared to 7.87% in the June proposals. So, there had been some relaxation to address final company concerns, but it was modest. Moreover, in terms of total revenue reduction, these controls were "tougher" than the RPI-X price controls for any other regulated company, and considerably tougher than the previous RPI + X electricity price caps.

Per normal regulatory practice, the outline proposals gave each company a month -- to 30 September 1994 -- to decide whether to accept its proposed control in principle. Otherwise, the matter would be referred to the MMC.

### 16. Response to the outline proposals

What was the general response? I was hoping, of course, that the proposals would be welcomed as a good deal for customers; that this significant tightening of the controls (compared to the initial controls) would be recognised as more severe than for any other regulated company; and that at last the growing media concerns for customers had been addressed.

But the Electricity Consumer Committee chairs -- who normally were supportive -- were critical. "X is only 2", they said. "Yes", I explained, "but immediate price reductions of 11 to 17% are better than a higher X." "But that's just resetting the control", they replied, "X is only 2". The initial Po price reductions were something new. It seemed that the strength of a price control was still measured by the level of X. Perhaps the chairs felt that the companies should be pressed to an ongoing annual efficiency increase that exceeded 2%; but I didn't feel we could justify that.

Because the price control proposals were less severe than had been suggested by the leak of the April document, which was the last "information" that the stock market had, share prices surged. It seemed that the regulator had given in: The companies had won; and customers had lost. Soon, there were press reports of champagne corks popping at company headquarters. The media response was uniformly critical.[54] Adverse comments continued for several weeks. Clearly, this was a public relations disaster for us – or, more precisely, for me.

### 17. Initial impressions of analysts' reports and alternative calculations

The morning after the 11 August announcement I asked the OFFER price-control team to regroup, and to begin a Post Mortem: What had gone wrong? An understanding of this experience was important for its own sake, and because I had to reset the distribution price controls for the two Scottish companies at the end of September.

We went through all of our cost estimates and other assumptions. Although it was possible to argue for slightly tougher assumptions in one or two respects, we thought that they would not have made a significant difference to the proposed price control. The main problem, we thought, was that the control had not been judged on its merits, or taking proper account of the

[54] I had "missed a golden opportunity to correct the mistakes made by the government" at the time of privatisation. "Mr Littlechild started off talking tough and has ended up selling the pass" (*Daily Telegraph,* City Comment, 12 August 1994, p. 19). Its editorial argued that I "could have gone much further", basing its evidence on "the progress of the companies' share prices, which soared on news of his final proposals".

benefits to customers, but instead by the share-price increases. These in turn had been caused primarily by the artificially low share prices that followed the earlier leaked document. The share-price increases suggested to observers that companies and shareholders would benefit too much from the new price controls, so this must have been at the expense of customers.

Geoff Horton and his team calculated that the observed share price increases of 8-10% could have been accounted for by the initial Po price reduction being 2% to 3% more lenient than the market expected, or alternatively by the subsequent X value being 2% rather than 3%. Also, the banding of companies in the final proposal led to proposed Po reductions that were on average 2% less than the precise model results. Did this mean that, if I had not been concerned to minimise company opposition by banding the initial reductions, all would have been well?

Further calculations suggested not: A more major adjustment would have been required to avoid share price increases: perhaps something close to an average initial cut of 20% and X equal to 4.

We then examined what a tougher set of assumptions would have implied for initial Po reductions. Lower opex and capex levels could have increased the average Po reduction by 4%; increased revenues from other sources by 9% to 13%; an alternative method of valuation (e.g., assuming lower dividend growth) by 6%; and no banding of companies by 2.7%. The total was 21 to 25%: Using all of these "tougher" assumptions, we could (in theory) have argued for initial price reductions that averaged around 34-38% rather than 13%.

However, as Michael Beesley pointed out, "we indeed <u>could</u> have been much 'tougher', but this would simply mean that we would have judged differently – not that our judgements would have been better informed." He suggested ways to improve the price control review next time, with the emphasis on improving OFFER's information.

"Meanwhile," said Michael, "how do we view, and thus interpret in public when necessary, the stock market reaction which set all this worrying off?" He argued that it was unlikely that stock market investors had better information than us and documented that there was a notable lack of uniformity among analysts. Instead, other factors were fueling the continued increase in REC share prices: notably removal of regulatory uncertainty about clawback of previous profits and treatment of potential gains from NGC flotation and from takeover bids.

After making numerous ingenious calculations, he concluded that the "relief" that was felt by the stock market -- that the price control was less onerous than had been feared -- could account for the first day's increase in share prices but not for all of the second day's increase or for subsequent increases. "I think we have a strong case for <u>not</u> being defensive. Market movements have been principally due, we would argue, to removal of regulatory uncertainty, in itself desirable, while we have maintained regulatory principles."

Finally, Geoff Horton added the suggestion that "the binding constraint on what we did was probably the profits projections". If we had done more work on companies' financial provisions, we might have concluded that there was scope for reducing dividend cover, so that "we might have concluded that only low profit growth was required and this could easily be

obtained by ceasing to make provisions and drawing from past provisions". So, we needn't have made as much as 50% uprate in flotation value of initial assets.

### 18. Referral of SHE to the MMC

On 25 September 1994 (about six weeks after proposing the revised REC price controls) we proposed revised distribution and supply price controls for the two Scottish companies. They were calculated on essentially the same basis as for the RECs. However, for several reasons -- not least because their previous price controls that had been set by the Scottish Office had been tighter than the RECs' controls -- our calculations suggested no case for initial Po price cuts for the Scottish companies. Consequently, our proposed tightening of their distribution price controls was limited to RPI-2 for Scottish Power and RPI-1 for SHE.

Nonetheless, I remember thinking when I proposed the Scottish controls that I had perhaps been a little tougher on the Scottish companies -- particularly SHE -- than on the RECs. Had the public response to the REC price control proposal suggested to me that it was better to err on the side of being too tough rather than not tough enough?

"Tight price curbs on Scots power groups" wrote the *Financial Times* (30 Sept 1994). Share prices of both companies fell ("plunged", said the *Times*): Scottish Power was down by 31p (8%), and SHE was down by 45p (10%). Even so, "the Consumers' Association condemned the ruling for being too lenient" (*Guardian* 30 Sept 1994).

In the event, Scottish Power accepted its proposed control; but SHE did not. On 14 November 1994 I referred SHE's proposed distribution and supply price control to the MMC.[55] Its report was due within six months (by mid-May 1995); hence the report could inform our ongoing reconsideration of the REC price controls.

### 19. Post-Mortem Meeting 3 November 1994

Unsurprisingly, all 12 companies accepted the outline proposals, and our staff began the task of translating the price-control proposals into detailed licence amendments. These would, per convention, be put out for consultation in December 1994, including to the companies for formal acceptance before implementation for the new control period beginning 1 April 1995.

Those of us most involved in the price control analysis[56] gathered again on 3 November to take stock. There were four topics, on which our views and conclusions were, briefly, as follows:

The review with hindsight: Deputy Director Peter Carter suggested that some assumptions were a little generous but the most important reason for the perceived leniency and the associated increase in share prices was the decision not to claw back profits from the present (privatisation) control. I noted that public opinion was strongly in favour of clawback and the

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[55] Allegedly, I was "behaving like the bully who, having been comprehensively roughed up by the local gang of toughs [the RECs], bolsters his ego by picking on the smallest child within reach" (*Times*, Tempus, 29 Oct 1994).
[56] Myself, Geoff Horton, Andrew Walker from his team, Professor Beesley and Deputy Director Peter Carter.

RECs would probably have accepted an element of retrospection. "Mr Horton to consider whether there was a calculation which might suggest the magnitude of a profits clawback."

Public defence of the proposal: Blaming the existing (privatisation) price control would call into question the decision not to review it and the effectiveness of RPI-X regulation. We could explain why profits clawback would have adverse effects, and why the present proposal was the largest ever price-control shift towards customers. But further thought was needed.

Action in the medium term: Early review of the control "would not produce any radical results unless different assumptions were made with respect to asset valuation, profits clawback etc. As these would cast doubt on the veracity of the existing control, and an early review would damage incentives, it did not seem a helpful way forward." Scottish Hydro Electric [SHE] had appealed its price control, and the MMC report "might contain implications" for the RECs, but might be "rather vague". A final decision would await the MMC report on SHE in June 1995.

Lessons for future price-control reviews: The timetable of 12 months total, with six months for consultants, had been too tight. Consultants were relatively poor value for money compared to in-house staff and secondees, and they had failed to provide robust conclusions with respect to the future need for capex and opex. But significant improvements in information would require more direct supervision from OFFER of separate accounts. Publication of the hitherto confidential "presently minded" letter "would have implications with respect to the timetable, workload and commercial confidentiality [but] might allow a more balanced judgement to be made with respect to the final proposals". "Mr Horton to produce a note on implications for the next transmission price control review."

## 20. Calculations of excess profits and a public defence

Although clawback of excess profits did not seem a regulatory option at that stage, a calculation seemed worth doing to establish whether failure to do so was a plausible reason for the adverse reaction to our price-control proposal.[57] My interest in the calculation at the time perhaps suggests an increasing and arguably belated awareness that a political as well as an economic solution might be needed. Though how to do that was another matter: to facilitate privatisation and encourage investment, regulators were statutorily independent of Government ministers.

Better understanding of excess profits from the previous (but still ongoing) price-control period was also a way of understanding the extent to which it was the initial price control at flotation -- rather than our proposed new forward-looking control -- that had 'got it wrong'. Geoff calculated that if our proposed average initial 14% Po reduction (with X of 2) was "about right" for the next five years, then the initial price control to get to the same place as that average 14% reduction would have been on average RPI – 1.5 instead of the actual average RPI + 1.3.

I made some further calculations that suggested that "our original April 1994 letter, which seemed to us untenable in terms of forward-looking costs, was nonetheless entirely plausible

[57] Subsequent events suggest public support for clawbacks. In 1997, the then Labour Government enacted a Windfall Profits Tax on all privatised utilities. In 2008 and 2013 there were further calls for windfall taxes on energy companies. And following soaring energy prices, such a tax was implemented in 2022.

in terms of confiscation of past excess profits plus a forward-looking judgement which matched our final proposal.” Share prices rose because we didn’t seek to confiscate those excess profits. I concluded that “There does seem to be support for the proposition that, on a forward-looking basis, we got the new control about right and were not ‘taken in’. The outstanding difference between us and the critics is the treatment of past ‘excess’ profits. We should be aware that to the extent we explain and justify (and quantify?) this view we (a) expose the previous Government decision and (b) lay the basis for a one-off electricity utilities profit tax.”

Two different interpretations of our proposed price control thus seemed possible: Some of the media had argued that the proposed control was too lenient because it failed to take account of relevant information, and that I had been taken in by the companies’ cost projections. Our alternative interpretation was that the proposed control broadly got it right going forward but was being blamed for sticking to the underlying principle of RPI-X incentive regulation and for not clawing-back the excess profits that accrued during the previous price-control period. My job was now to try to convince the world -- including the media -- of our interpretation.

At a conference in London on 30 November 1994 I summarised the proposed price control, noting that “These price reductions are very substantial”, worth over £2.5 bn to customers over the five years (Littlechild, 1994b). I addressed the main points of criticism and indicated future directions for policy.[58] I concluded that we should now look forward and that the new price control “represents very good value for the electricity customer”.[59] One newspaper described the speech as “a strong defence” (*Financial Times*, 1 Dec 1994); another newspaper described it as “an extraordinary defence” (*Guardian*, 1 Dec 1994).

### 21. The Trafalgar House bid for Northern Electric, and Northern’s defence

Any comfort that the 30 November speech had successfully explained and defended the price control turned out to be short-lived. On 14 December 1994 it was announced that Trafalgar House -- an international conglomerate that was based in Hong Kong -- was considering a take-over bid for Northern Electric. Northern was a relatively small REC, and one of the three that had the largest (17%) proposed Po cut (hence was one of the least efficient). Trafalgar announced its bid terms on 19 December. Northern’s share price increased by about 12½%.

On 20 December I issued a consultation paper that invited views on the takeover. I had to advise the Secretary of State Michael Heseltine -- head of the Department of Trade and Industry (DTI), whose responsibilities now included Energy -- on whether to allow it or to refer it to the MMC for consideration.

There were no competition issues; but I was concerned that the removal of the share price quotation “removes a source of information about investors’ views of comparative performance

[58] These future directions were: greater separation of the regulated distribution business from other possibly competitive businesses; making public more information at an earlier stage of the price control reviews; and greater scope for competition -- for example in retail supply, metering, and connections to the networks.

[59] “Many people feel that the previous distribution price control was unduly lenient. But that does not justify replacing it by an unduly harsh one. The past price control is now water under the bridge. My job is to look to the future, and to regulate the companies firmly but fairly. On this basis, the new price control strikes a reasonable balance, and represents very good value for the electricity customer” (Littlechild 1994b, p. 22).

and the effects of market factors, including regulatory actions"; and I was also concerned about the potential loss of information if the licence holder was a subsidiary. Trafalgar also proposed a customer rebate.[60]

The bid was not referred, Northern's share price increased by a further 11%, and other REC share prices increased too, as the decision indicated the likelihood of further takeovers in the sector. "Northern bid a green light for predators" (*Telegraph* 15 Feb 1995). However, Northern Electric still resisted the Trafalgar House takeover. On Friday 17 February it issued its final defence document, with "a package worth £560m for its shareholders".[61]

Although there was some criticism of the Government's privatisation arrangements, the newspapers were rather more critical of me. First to the attack were the *Daily Mail*[62] and the

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[60] "Trafalgar House had built a £20 rebate for customers into its bid terms, taking up a hint by Professor Littlechild that it would be easier to clear a bid which benefited customers. At the same time it also showed that £26m [= £20 x 1.3 m customers] could easily be found from Northern Electric to return to customers" (Pallett 1998, p. 43).

[61] "The Board promised a £1.50 special dividend, a £1 bonus preference share and distribution to shareholders of Northern Electric's share of the proceeds of National Grid flotation, which it valued at £2.57 per share. This was worth over £5 per share and would result in the company becoming temporarily very highly geared, 225 per cent on an historic cost basis, declining to 100 per cent by the year 2000, although Northern Electric claimed that cover for interest and preference dividends would remain healthy. Northern Electric also promised fat dividend increases" (Pallett 1998 p. 44).

[62] Under the heading "Northern riches show farce of price curbs", it wrote "Reach for your electricity bill, focus on how much you are being charged and, if you have teeth, prepare to gnash them now. Any lingering pretence that electricity privatisation achieved a proper balance between the interests of customers and investors flies out of the window this morning. … In a little over four years, shareholders have multiplied their money more than 4 ½ times. … If Northern can afford to give away assets worth more than twice the original value of the company, we must wonder whether it should not have been forced to operate differently. Perhaps it should have been made to share the benefits of the wealth it was creating more equitably, through lower prices to customers. … What is clear is that the electricity bosses bamboozled the Government and the banking advisers when the shares were privatised in 1990. They talked their way to much stronger finances than they really required, and greater opportunities for raising prices than they deserved. We do of, course, have a regulator to ensure fair play, Dr Stephen Littlechild, director general of Offer. The power men made some show of quaking in their boots last spring as Littlechild set about reviewing price controls until the end of the century. Sadly Littlechild displayed all of the resolution of a blindfolded rabbit on a railway track. He congratulated himself on saving customers more than £2 ½ bn over the next five years, while the power men tried hard not to chuckle in his face. The Northern affair is the most tangible evidence yet of how badly he got it wrong. Northern is almost blowing a fuse, so much cash does it have to spend on trying to persuade shareholders to resist Trafs [Trafalgar House]" (Michael Walters, *Daily Mail,* 18 Feb 1995).

*Telegraph.*[63] Next came the *Independent.*[64] Then the *Telegraph* again.[65] The strength of feeling was undeniable.

### 22. How to respond to the Trafalgar House/Northern Electric development?

Our family was on a long-planned vacation that middle week in February.[66] First thing Monday morning (27 February 1995) I convened an urgent meeting with senior colleagues to consider "the possibility of attack as the best form of defence, specifically an MMC reference of Northern's price control condition". This was "a matter of urgency" because the Trafalgar House bid would become unconditional on 10 March, and our consultation on the formal wording of the price-control amendments was due to end on 11 March. All of the companies had accepted the proposed wording, and no dissenting views had been expressed. It would be

[63] Under the headline "Time for Littlechild to turn off the lights and leave", it wrote "Northern has only just spent £80m buying back its own shares and now it proposes to pay a special dividend of £170m plus a distribution of the proceeds of its shares in the National Grid, worth roughly £280m. All told, this comes to £530m of capital that Northern now reckons it can do without, in a business which was sold by the government barely five years ago for £300m. It was clear at the time that the dozen businesses were being sold too cheaply, in part because no one saw the value of the National Grid and in part because of the lax price regime for their first five years in the private sector. That initial period is now up, the value of the grid has been recognised and the chance for a new, tougher regime presented itself. Yesterday's proposals from Northern show that the opportunity has been comprehensively missed. Not to put too fine a point on it, the companies have hoodwinked the regulator and Stephen Littlechild's failure to understand the industry he regulates is graphically exposed. To put the failure into perspective, Northern has effectively admitted that it has charged its 1.4m customers £380 each more than was needed to keep the lights on and provide a decent return to shareholders. …. Northern directors may argue that, having met the regulator's price demands, they are now merely discharging their duty to shareholders. The regulator has no such argument behind which to hide. These numbers expose the real gains from privatisation, and the other 11 companies could do exactly the same. It was Mr Littlechild's responsibility to ensure that some of the benefits went to customers. He has failed, and he should resign" (*Daily Telegraph*, City Comment, 18 Feb 1995).

[64] Under the headline "Electric storm in the city" was this editorial. "If they ever make the film *The Regulator*, they should not give the title role to Arnold Schwartzenegger. Judging by the performance of the electricity industry regulator, Professor Stephen Littlechild, muscular ruthlessness is not required for the part. Professor Littlechild is the man who has overseen excessive levels of profit-taking in the regional electricity companies. Benefits to the consumer have been considerably less substantial. Now that the war over privatisation is finished, the new clashes will be all about how people like the professor discharge their responsibilities. … something has gone wrong in the electricity industry. The response by Northern Electric…has lifted the lid on how the RECs have been coining it. … On close scrutiny, it seems all RECs are potentially more profitable than was realised. This is not to say that consumers have suffered through privatisation. Prices have fallen and services have improved. But there has been a clear failure to strike an equitable balance between shareholders and the public. It turns out that the RECs have been able to gain far more from enhanced efficiency than the regulator had been led to expect….Professor Littlechild must have known, if only by keeping a close watch on share prices, that this was happening, and shifted the balance back the other way. It looks very much as though he was hoodwinked a year ago by the companies' assertion that there was limited potential for further efficiency gains. He made a mistake and he should admit it. If he does not, the regulator – our regulator- should be terminated" (*The Independent*, 21 Feb 1995).

[65] The *Daily Telegraph* came back to the attack (I had been advised that it was out to get me) with a main editorial entitled "A regulator's failure", which concluded "Professor Littlechild cannot credibly retain his post." There was also a more detailed article under the heading "Switch off, Professor". "… Prof Littlechild … has been comprehensively hoodwinked, and the consumer is paying. … It is tempting to blame the regulator, and here that the buck must stop. Prof Littlechild is there to see a fair division of gains between customers and shareholders, and he has failed to do so. He should take his incomprehensible equations and return to his post at Birmingham University." (City Editor Neil Collins, *Daily Telegraph*, 22 Feb 1995)

[66] When my daughter went back to school, she discovered that newspapers were not available in the pupils' common room that week. The headmistress thought it better that she and classmates not see the articles about me.

normal regulatory practice to implement the amendments forthwith, and the revised price control would come into effect on 1 April 1995.

However, there was a serious complication. The Government was in the process of selling its remaining 40% stakes in the two generating companies: National Power and PowerGen. Marketing had begun on 10 January; strike prices were to be set on 4-5 March; trading was to begin on Monday 6 March; and a “stabilisation period” had been put in place that would continue for the next month. Government and related entities such as regulatory bodies were expected not to make significant announcements during this whole period. I knew that the distribution price control was not relevant to the generation market; but the City and the media might well not see it this way.

I drafted a possible three-page statement that announced a reference to the MMC.[67] But we didn’t pursue an MMC reference, so I (presumably) concluded that it would be better, and quicker, to try to deal with the matter myself for all of the companies than to ask the MMC to investigate just Northern. But whether to intervene at all was still a major question that now had to be answered in the next few days.

Given the potentially serious effect on the generators’ flotation, I asked Peter Carter to explain the situation to the DTI, which he did that Monday afternoon (Feb 27). DTI responded the next day, having discussed it with Treasury and legal advisers Slaughter and May. DTI advised that the sale of the generators’ shares should not preclude my taking whatever action I deemed appropriate with respect to the REC price controls.

### 23. Further steps

I now consulted John Swift QC, fellow regulator (Office of Rail Regulation), as to my statutory duties and the options that were open to me. I wanted to ensure that I acted properly and minimised the prospect of any legal challenge. Clearly the RECs would not look favourably at any reopening of the review.

I also looked back at the brief history of UK utility regulation to see if any regulator had previously reopened a price control review after the final consultation. I discovered that Professor Carsberg at Oftel had indeed done so. He had explained that the consultation had brought forward some new information of which he had previously been unaware, and said that if he had known it, he might have acted differently. He reopened the review, examined that issue, and modified his proposed price control in that respect.

[67] The gist of this draft statement was that the measures that were now proposed by Northern were significantly different from the business plan that it put forward in the price-control review, in general operating the business with far fewer resources than it previously argued for. If this was consistent with maintaining quality of service, it constituted new information that was not available at the time that I reset the control and implied that a more severe price control would be appropriate. My proposed control had previously seemed reasonable to me, but had been particularly criticized since the bid defence, so this matter was best dealt with directly by the MMC.

So far, our consultation on the proposed price control had brought forward no new information: It was essentially a formality, since the substance of the new control had been agreed-on back in September 1994. But I thought that, in one sense, new information had become available.

Consequently, when I happened to see Bob Spears, a representative of the Major Energy Users Council (MEUC), which would have welcomed a tougher control, I asked whether the MEUC had thought about putting in a submission. It could suggest that the repeated share price increases since the price control was proposed, and the takeover bid and Northern's response, constituted new information that was not available to me at the time that I set the control. Bob was surprised that there might still be a possibility of reconsidering the control, but the MEUC nonetheless made a submission along these lines.

I also asked Peter Carter to take soundings at the Treasury, which was responsible for the flotation, rather than just at DTI. Treasury must have been in a difficult situation: Regulation of the REC distribution price controls was in principle quite separate from the non-price regulation of the increasingly competitive generation sector; but reopening the REC control would arguably have implications for regulatory stability and competence. Treasury called in their legal and financial advisers. "The Treasury and their advisers concluded at that meeting that if the Director General made a statement on the regional electricity companies' distribution controls it would not have a significant effect on the generators' share prices".[68]

At some point, a message was conveyed to me that Secretary of State Heseltine would support a reopening of the price-control review. I telephoned Mr Heseltine at 6pm on Sunday 5 March. He explained his interest in the matter: There appeared to be significant public concern about the RECs' profitability, and something had to be done. The electricity industry was in DTI's area of responsibility. It was entirely for me to decide whether and how to act; and if I did decide to take action, then he would be prepared to support me. But if I didn't act, then he would need to consider what action he himself should take.

I explained the various issues and problems with acting. He commented that one sometimes had to use political instinct as well as economic calculation. According to the later Treasury investigation, I indicated that I was "not then minded" to reconsider the REC price controls, but I also said that I would consider the matter further.

### 24. Agonizing and deciding

I now had to decide whether or not to implement the proposed new price control, which had been agreed-to by all of the companies. I agonized about this over the weekend of 4/5 March.

The argument for implementation was clear: The proposed new control was the result of a carefully conducted review. It would bring greater reductions in prices and benefits to customers than any other price control review to date, in any regulated sector. After carefully

[68] National Audit Office (1996, p. 49). However, "The Treasury conceded that the Director General's statement on 7 March 1995 had a much greater than anticipated impact on the generating companies' share prices and, in retrospect, officials felt that they should have consulted Ministers over the weekend of 4-5 March rather than concluding the matter was settled on the basis of their advisers' firm advice that the prospect of a statement by the Director General did not call into question proceeding with the sale." (p. 49)

scrutinising all the assumptions and calculations, we could see no significant errors in it. The objections to it seemed to be based mainly on the repeated increases in REC share prices; but these could be explained as a correction of the misreporting of the first price-control letter, then the gradual recognition by the market of the value of the REC businesses that arose from various sources, including: profits in the previous period; lower cost of capital; greater regulatory certainty; and new prospects of takeover.

To reduce next-period prices to reflect what were essentially previous-period factors would be inappropriate: tantamount to a retrospective clawback, which was inconsistent with the RPI-X incentive regulatory regime. All of the companies had accepted the proposed revised price control. And (until my prompting) the final consultation on the actual licence amendments had identified no reason not to proceed.

And yet, the presentational and political problems seemed enormous: In the view of the media, OFFER's Consumer Committees, the Minister -- perhaps almost everyone except the companies -- the proposed new price control simply did not strike an acceptable balance between customers and shareholders. There was no public sympathy for the companies and their shareholders.[69] My explanations and justifications had not been persuasive.

Moreover, there was every reason to believe that the situation would get worse: Implementing the new control would remove any lingering uncertainty as to whether the control would actually be implemented, which would further increase REC share prices. Further takeover bids could then be expected, which again would increase share prices. Although there would soon be substantial initial reductions in electricity prices and company revenues, these had already been factored into the share prices. And over the next year or two, as companies began to implement cost reductions, profits and dividends would begin to rise again, and share prices would continue to rise.

Rather than the controversy dying down, it seemed more likely to get worse. It seemed inevitable that, before long, the price control would have to be reopened and reset. This would not only be an admission of personal and regulatory failure; it would also undermine the concept of RPI-X incentive regulation, which was in the long-term interest of customers.

In short, it was difficult to see a basis for not proceeding with the proposed new control; but that control seemed unacceptable and untenable. But what changes could be made? Perhaps I

[69] "The RECs were then widely perceived by the public to be fat, lazy monopolies whose chairmen enjoy unreasonably inflated salaries, selling electricity whose domestic price had not fallen in real terms despite dramatic decreases in the price of fuel. This, and high profits in other utilities, led the Labour Party in opposition to promise to impose a windfall profits tax on utilities, which was duly implemented when they were elected in 1997" (Newbery 1999, p. 13). "The media were obsessed with the pay of what were perceived as quasi-civil servants who had been given substantial pay rises for essentially doing the same job. This attitude, in part, explains the hostile reaction to the first review and the increase in share prices. Electricity is not a commodity that customers make a conscious decision to buy, but a necessity of modern life for which they are invoiced every three months, so customers are especially sensitive to the accusations of a 'rip off'" (John Roberts, Manweb CEO, pc 2 Oct 2023). As an example of the salary issue, "Last year [one chairman] made £466,287 on top of his £237,000 salary by cashing in his share options in April. His salary before privatisation was £68,000" (*Independent,* 25 Jan 1995).

could justify very minor trimming of cost assumptions, but this would not produce a control tough enough to address the public concerns. Clawback of previous profits could produce a tough enough control but would be inconsistent with my previous policy, inconsistent with the philosophy of incentive regulation, with which I was personally associated, and arguably inconsistent with the REC Prospectus and the whole privatisation programme.

I thought of resigning: I had failed; let someone else have a go, someone who will see things differently. But then I thought: What are the practicalities of that? How long will it take to appoint someone, and for that person to gain sufficient understanding of the situation to assess whether and in what respect the previous carefully considered approach was wrong, and to propose and defend a credible and significantly different alternative? What sort of chaos would that mean for the stock market -- not only for the REC shares but also for the two generators? What would it mean for regulatory stability? And, of course, for my own reputation….

After this agonizing, I came to the following conclusions: that the proposed and agreed new price control was simply not sustainable over time in the face of the media opposition; that it was my responsibility to sort this out and that I was best placed to work out what, if anything, had gone wrong and what should be done about it; that although it was undesirable to reopen the price control review, it would be worse still to implement the new control and then later reopen it -- an action that I had resisted for the past several years.

But what reason to give for reopening the review? I could hardly say "I seem to have got this wrong, I don't know why, but I'd like another go." This is where new information came in. In a statement on the morning of Tuesday 7 March I solemnly explained that, before making any licence modifications, the Electricity Act required me to consider any representations that are made. I pointed to the MEUC's submission that expressed concern about the increases in REC share prices and Northern's final defence document. Sometimes one needs a fig leaf. I later explained that "it was better to grasp the nettle now and consider the possibility of tightening the controls before they were finally put in place, than to risk long term instability and lack of confidence in the regulatory regime by doing nothing" (OFFER 1995, p. 2).

It was also important to recognise the practicalities here, and to minimise instability as far as possible. So I said that the agreed new price control would actually come into effect for the first year, and I would consider with interested parties including the RECs whether there should be a further tightening of the price controls from 1 April 1996.

### 25. Stock market, company and media reactions

After our Tuesday morning statement, I received a message saying the OFFER Consumer Affairs staff were strongly supportive. However, the RECs' shares fell by 20%, and the two generators' shares fell by 10%. "Since the government had completed the sale of £4 billion of shares in the two companies just the day before, the timing was embarrassing" (Green 1995, p. 113). The front-page headline in Tuesday evening's paper was "ELECTRICITY PRICES CLAMP: Watchdog's warning sinks sell-off shares", "a boost for consumers but a body blow

for investors" (*Evening Standard*, 7 Mar 1995). The next day, all the papers focused on the announcement: "Anger at power prices review", the "industry was in turmoil".[70]

What about the electricity companies? Midlands chairman Bryan Townsend reportedly said "The announcement has effectively removed all confidence in the regulatory framework and replaced it with instability. It is now impossible for us to implement the measures we had planned or indeed to take sensible business decisions about the future" (*Financial Times*, 8 Mar 1995) -- on which one city editor commented rather scathingly.[71] In contrast, another chairman, Sir Keith Stuart of Seeboard, said "Whilst there may be increased uncertainty over the future regulatory environment, this uncertainty is no greater than that faced by many businesses operating in competitive markets" (*Financial Times*, 8 Mar 1995). The next day Jim Smith, chairman of Eastern Electricity, telephoned to offer sympathy and suggested working through this rationally, and soldiering on. And the day after, there were calls from several REC chairmen suggesting that they were agreeable to a payment to customers. This was not an idea that I had put to the companies: They themselves had initiated it.

Reportedly, "the decision was warmly welcomed by consumer groups, which had called the previous regulations lax" (*Daily Express*, 8 Mar 1995). Other newspapers were generally critical, sometimes in colourful language.[72] Fund managers had various views -- generally critical.[73] But there was occasionally some acknowledgement of the challenges of regulation.[74] The issue was raised in the House of Commons where the Prime Minister defended the regulatory system.[75] There was also some support from leading Ministers and officials.[76]

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[70] One pension fund said my statement "defies belief … I feel almost as if I have been sent to the lunatic asylum". There was more. "Furious investors assail 'false prospectus'". Institutions were "incensed". One institutional investor was reported as saying "suddenly everything changes and who is to say it won't change again? It is like trying to play football on a cross-channel ferry in a Force 10 gale". "Others attacked what they saw as capriciousness of regulation." But "some institutions, however, felt that the lessons of investing in regulated industries should have been apparent for some time…. With every privatisation issue – gas, telecoms and water – the regulator comes along and moves the goal posts. It is a bit like running up the down escalator."

[71] "The directors of Midlands Electricity had a panic attack and immediately predicted that the regulator's proposals meant the end of the world as they know it. … In that case, gentlemen, perhaps you would step aside for a board which can take sensible decisions in an uncertain world; most managers in the private sector do nothing else" (Neil Collins, *Daily Telegraph*, 8 Mar 1995).

[72] "Man with beard casts thunderbolt" (*The Times*, 8 Mar 1995). "Professor Littlechild is not just shifting the goalposts; he seems to have dug up the entire pitch" (*The Independent*, 8 Mar 1995). "Suddenly supermouse puffs himself up like superman" (*Daily Mail*, 8 Mar 1995).

[73] "One leading fund manager said: 'I am staggered by the timing and the total ineptitude of it. I expect him to go fairly soon'" (*Guardian*, 8 Mar 1995).

[74] "The job of the regulator is difficult. It requires judgement of complex financial issues as well as common sense and intuition. Professor Littlechild has struggled with this balance and yesterday's market chaos is the price. But it is better that he acted late than not at all" (*The Independent*, 8 Mar 1995).

[75] The Prime Minister rejected calls by Tony Blair, the Labour leader, for a review of the regulatory regime for all the privatised industries. "Mr Major [Prime Minister] said OFFER's action showed that the regulatory system was flexible and was working. Senior officials said Mr Major retained 'full confidence' in Prof Littlechild" (*Financial Times* 8 Mar 1995). (I was told that, at a Cabinet meeting, the Prime Minister commented 'independent regulators' and sighed.)

[76] Mr Heseltine explained why I had decided to go ahead and told Channel 4 News 'What he has done is good news adding to good news'. There was a suggestion in one newspaper that a minister was "furious" but a senior civil servant at DTI telephoned to reassure me that "No DTI minister is furious. We have been aware of this issue for a week, and you have told us everything. We have no complaints whatsoever. We are right behind you. As Director General you have played it absolutely straight."

In the course of the next day, Wednesday, the REC shares fell by another £750m, but "shares in National Power and Powergen … steadied after assurances that the generators would not be affected by the new price regime" (*Daily Mail,* 9 Mar 1995). I was even defended to some extent.[77] On Thursday, REC share prices rallied too.

With regard to the prospective takeover, Northern withdrew its own offer to shareholders, and was forced to recommend Trafalgar House's £11 offer. However, Trafalgar House sought to lapse its £11 bid, and offered £9.50 per share on condition that Northern directors accepted it. Northern Directors rejected this.

The previous day's support from the *Telegraph* was short-lived: "No professor, it's sheer madness to continue your work" (*Daily Telegraph*, City Comment, 10 Mar 1995). There was some support in Friday evening's newspaper.[78] And further discussion -- generally critical but with suggestions for alternative approaches -- in the weekend newspapers.[79] And a striking difference of view as to regulatory independence.[80]

### 26. Further reactions from companies, media, brokers and others

The agreed-upon REC price control -- with immediate Po price reductions of 11 to 17% -- would go into effect on 1 April 1995. We now began gathering relevant evidence for the re-review. But first a series of meetings in March 1995 -- mainly with a few REC chairmen or CEOs coming to my office -- revealed a variety of concerns and proposals for alternative policies.[81]

Northern Electric said I should ask the Takeover Panel whether this bid should proceed because the situation was now wholly in favour of one party. Enron said the UK free market model was

[77] "Mr Littlechild's announcement was a shock but falls within his rights as regulator. Everyone forgot that his price determinations were only provisional and Northern's defence gave him the chance to re-determine" (*Daily Telegraph*, City Comment, 9 Mar 1995).
[78] "Electricity regulator Professor Stephen Littlechild's warning that he is considering tighter price controls for the RECs next year represents a timely injection of reality into a sector which was moving towards a fantasy land inspired by an overdose of bid speculation. … For the other RECs the message is quite clear. The responsibility to balance the interests of customers with those of investors is paramount. The price of independence must not be paid by consumers." (*Evening Standard*, 10 Mar 1995)
[79] Under the heading "Mouse that roared like a watchdog", one comment was about the OFFER team: "If there were more accountants with business nous rather than civil servants and economists, he would manage the process more competently" (*Daily Telegraph*, 11 Mar 1995). Elsewhere, "industry and its customers would be better served by a permanent panel of experts to police all the utilities with a more common thread of policy. This would replace the current hotch-potch and … would remove the cult of personality from decisions on such vital matters" (Michael Smith, Business Editor, *The Observer,* 12 Mar 1995).
[80] "Littlechild … hardly emerges as blameless, but at least one can now say that he is truly independent of the Government" (Lawrence Lever, Financial Editor, *Mail on Sunday*, 12 Mar 1995). In contrast, "Anyone who thinks that last week's furore over Professor Stephen Littlechild was about a regulator's change of heart is guilty of a touching naivety. While government ministers lose no opportunity to protest the regulator's independence, there is no doubt that there is a constant dialogue between the two. After all, if you were a regulator, wouldn't you make it your business to keep in touch with the organ-grinder? … Nothing so crude, of course, as an edict from Whitehall to the regulator, but Professor Littlechild could be forgiven for trying to anticipate his master's wishes" (William Kay, *Independent on Sunday*, 12 Mar 1995).
[81] My practice (and that of Ian Byatt water regulator) was to visit each regulated company about once a year, where we and senior company staff would exchange thoughts about current issues. Consequently, we were used to talking freely. On those visits I also met the local Consumers' Committees and other interest groups to hear their views.

not evolving as expected because of regulatory interference: Today's example was indicative of political and media pressure.

Bryan Townsend (chairman, Midlands Electricity Board, and a non-executive director of NGC) said that he had "spoken to everybody" and they "would all go along in principle" with some distribution to customers of the proceeds of the flotation of NGC. (It was remarkable how quickly the RECs realised that something needed to be done and organised themselves to do it.)

Mike Hughes (CEO, Midlands Electricity Board) followed up with many calculations, again favouring an explicit customer rebate. If the deal involved the sale of NGC, that would enable the RECs to defend acceptance of the deal, and it was in shareholders' interests to restore confidence in the regulatory regime as soon as possible. But if the amount involved was too much, then the RECs would have to take the Northern Electric route, exiting the generation and retail supply businesses. (He knew that competition in both sectors was close to my heart.)

South Wales Electricity Board (SWALEC) was concerned at this diversion of management effort. David Jeffries (chairman, NGC) said the RECs were interested in combining the NGC flotation and the REC price control situation, and wanted to know whether this was a runner.

John Devaney (CEO Eastern Electricity) -- a businessman with US experience outside the electricity industry -- observed that the industry still looked for five years of stability, and priced up to the allowable limit; but neither of these would obtain in another business. So Eastern would not be inflexible on this issue. As to the revised price control, RPI-4 would not be out of reach, or perhaps an equal Net Present Value via a customer rebate and an NGC rebate. As to timing, it had to look seemly, but not three months, because the City disliked uncertainty.

John Roberts (CEO Manweb) argued that nothing had changed, so he saw no reason for reopening the price control. He endorsed the points that I had made in my November 1994 lecture. But if the present situation wasn't resolved, then it wouldn't be possible to sort the NGC flotation. Consequently, if the price control were to be reopened, then it made sense to put the two issues together. Any objective analysis now had to be left behind; the challenge was to get us all off a nasty hook. A deal with the Government and regulator to include a rebate to customers would be preferable to revisiting X, which would be unintelligible to the media.

John Seed (CEO SouthWestern Electricity Board) said a change in X would have little effect on customer benefits but increasing X to 3 would be acceptable -- although the endpoint of the control after five years might then be too low. A cut in the standing charge for a year, saving £40-50, would be well received (presumably by customers but perhaps also by companies).

These CEOs were generally seeking a clean, quick, and effective solution, and they were keen to work constructively. But they had different views and proposals. And I felt that I could not simply announce a proposed solution: I had to investigate -- and be seen to investigate -- the actual situations of the various companies, and to base any proposed solution on these findings.

Consequently, on 24 March I confirmed that I would: implement the already-agreed-upon Po price-control reductions on 1 April; carry out another review and report on my re-review

findings within three months, by the end of June; and implement any revised price-control arrangements as from April 1996.

The media reported that hopes of a "quick fix" were fading, but there were very different suggestions as to what might be possible.[82] Brokers' views varied greatly.[83] One commentator grumbled about the time that I proposed to take studying the further data. But one editorial argued that "the whole episode underlines the enormous efficiencies that privatisation has achieved. …What this experience illustrates is that privatisation, overseen by a pragmatic regulator, has succeeded beyond anyone's wildest dreams" (*The Times*, 27 Mar 1995). In contrast, the Consumers' Committee chairs reportedly wanted much more.[84]

Two weeks later, industry and energy minister Tim Eggar "raised expectations" by suggesting a one-off NGC flotation bonus of £30 to customers, rather than the £25 that the electricity companies were reportedly suggesting (*Daily Telegraph*, 19 May 1995). And a new commentator weighed into the debate suggesting sliding scale regulation.[85]

### 27. The RECs' responses to the reopened review

Back to the reopened price-control review, where we invited views on the price control and the various concerns. We also asked the RECs to provide updated information about their actual costs and investment to the end of the last price control (31 March 1995), to update their projections with respect to opex, capex and other financial flows during the next price control period 1995-2000, to indicate whether any change to the control should be via Po or X, and to opine on new options such as profit-sharing. We then held a series of meetings with the RECs in mid-May, to review this information and to sense their thinking.

It was evident that the companies' positions had hardened. They were not now persuaded that anything was wrong with the previously announced price control. But consumer groups and

[82] Suggestions included a rebate for customers of between £50 and £100, where £100 would be equivalent to four months of free electricity since the average electricity bill was £290 per year (*Daily Mail* 25 Mar 1995).
[83] One broker predicted a £50 or so rebate plus a tightening of the price control from RPI-2 to RPI-3. He also commented "Littlechild says new information on the RECs has emerged. It hasn't. The figures are the same as before. It is just that he is determined to take a harsher view of them" (*Daily Mail*, 25 Mar 1995). One commentator suggested that "Professor Littlechild could probably get away with an RPI minus 4 pricing formula from next spring without industry opposition but he would get grief from politicians" (*Times*, 25 Mar 1995). Another commentator suggested that "A figure of, say, RPI minus 6 seems justified but will not show immediate returns, even though OFFER's regional committees are keen on this route" (*Guardian*, 25 Mar 1995). Another broker suggested the worst case was RPI – 8 plus £100 rebate, but "this would threaten the financial stability of the industry and prompt a reference to the MMC". He speculated that I would go for RPI-6 on its own or for RPI-2 with a rebate of £25 to £50, while another broker suggested RPI-4 plus £50 rebate (*Independent*, 25 Mar 1995).
[84] They urged me "to impose a one-off 10% reduction in electricity distribution charges for 1996-97 and tighten the price control formula to RPI- 5 for the three following years. … also repeating demands for benefits from the flotation of [NGC] … to be shared equally between consumers and shareholders. They want £1 billion, equivalent to £50 a customer, to be handed over to consumers in rebates" (Newspaper report, 3 May 1995).
[85] "If the inventor of the system cannot get it right, who can?" (Melvyn Markus, *The Times*, 20 May 1995). He reported Philip Burns and Ralph Turvey as advocating instead the sliding-scale regulation that applied to gas companies between 1875 and 1939. In their subsequent publication, "We review the case for intermediate power incentive regulation such as sliding scale when the regulator is badly informed …" (Burns, Turvey, and Weyman-Jones, 1998).

most others argued that the earlier proposal ought to be tightened, so as to secure a more reasonable balance between the interests of shareholders and customers (OFFER 1995, p. 3).

We scrutinised the REC information and projections. Had they misled us previously by providing false information or unduly high-cost projections? Most companies said that they had had to reconsider their plans in the light of our August proposals and had taken further steps to cut costs. They were now projecting lower opex at or about the level that was consistent with the assumptions that underlay the August proposals. A few companies said that they could not see ways of reducing their costs to the extent that we had assumed. Consequently, there was no reason here to question the assumption that we made in setting the new control, namely a 3% real annual reduction in unit controllable opex.

It was a similar story with respect to capex: Three of the 12 companies had underspent on capex in 1994/95 compared to their projected level in that year, and I therefore envisaged an adjustment to the price control for this (discussed below). But the other nine companies had not underspent. More importantly, there was no reason to challenge our assumptions on capex for the next five years which, in light of advice from our engineering consultants, already cut back on the companies' own plans by up to 25%.

With regard to the cost of capital, we had assumed around 7% pre-tax: in the middle of the 6.5-7.5% range that had been suggested by the MMC in its recent report on British Gas's transmission business.

All of this gave no reason to question the price control that had been proposed in August 1994 and just implemented. In one sense this was reassuring; but to change nothing would be a major disappointment to customers, or at least to the media. It would not be seen to "lance the boil". There would be pressure to reopen the price control in future.

Consequently, I needed some new justification for tightening the control, to address public concern. Then suddenly a possibility appeared, via the MMC's consideration of SHE's appeal against its proposed price control.

## 28. Our adjustment of flotation asset values

As part of its investigation, the MMC asked further questions about all aspects of the proposed SHE price control. For present purposes, the most significant questions concerned the adjustments to flotation values, which we had used instead of CCA asset values.

As explained above (Section 15), our argument was that investors at flotation expected a stream of earnings (via dividends) to justify the price that they paid for the company. If the cost of capital remained constant, then that cost of capital applied to the flotation value would yield the stream of earnings that they expected. But the cost of capital had fallen by about a third, and we had explained why uprating the flotation value by 50% would yield the same earnings stream for the REC investors.

However, the situation of the Scottish companies was significantly different, and we had argued that for price-control purposes the flotation value of the Scottish companies' initial assets

should be downrated -- as we had previously done in resetting NGC's price control -- rather than uprated. In both cases, this adjustment was because the return on capital had been held down by the Government in setting the initial price controls -- not because the cost of capital had since risen (OFFER 1994b, p. 21). Our proposals paper said remarkably little about this adjustment. How much lower than current cost book value should be used, and what value was in fact used? We gave no indication.

The MMC asked several questions about the uprating for the RECs. I no longer have access to those questions, or to our replies; but within OFFER we were rethinking the logic and calculations. Geoff Horton was no longer convinced of some of the arguments for a 50% uprate on the RECs and noted the MMC's sceptical line of questioning.[86]

## 29. Revised REC price control: Horton's proposed way forward

Ten days later, Geoff put down his thoughts on "The Way Forward" (19 May 1995) and posed several questions. Significantly, the first question was no longer whether to revise the REC control; the question now was by how much. That would depend upon "the strength of justifications for individual changes in the calculations, (to a lesser extent) the degree to which there would then be a likelihood of price rises in the year 2000, and (in practice) the likely acceptability of the result to public opinion."

His answer balanced economic and political considerations: Both were important. He worked now from a potentially acceptable aggregate revenue reduction back to a possible justification for it.[87] I think that this recognised the political realities that we faced and provided a valuable context. In answer to his first question – By how much should the control be revised? – Geoff concluded "I suspect we are looking at something in the £1200-1500m range".

Given his thoughts on the various possibilities, presumably the £1200m would comprise about £700m from reducing the uprating from 50% to 28% plus £460m from using precise calculations rather than bands. Increasing the target for opex reductions by 1% would yield another £270m, which would bring the total to £1430m.

As to the remaining questions, Geoff felt it would be difficult to make the same percentage reduction for all companies: "The results lead to a range of falls with 7.5% difference between the results for Eastern and Northern." Should there be clawback? "Not necessary in the case of electricity because of the large gains which have been made by shareholders in the past." Should any change be as a rebate, a change in Po, or a change in X? He preferred Po; but there were pros and cons. Should the form of the control be changed to profit-share? A dead-band

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[86] "There is an argument for no uprating even if the cost of capital has changed. The MMC put it to us. If lower earnings are now required to finance provision of finance, why should one maintain the old stream? Surely a competitive market would not" (9 May 1995).

[87] "I had been thinking in terms of a net present value effect of £1.75 billion. This is equivalent to about £75 a customer or a rebate of £50 combined with a tightening to X = 4 for the remaining years. Alternatively, it would produce (with the same X [=2] as at present) a drop in Po of around 14%, say -15% next year instead of -2%. The next few sections discuss whether any of the three criteria warrant an adjustment of this size." There were six items in his cost calculation, which could potentially yield the following amounts, though each had pros and cons: opex £270m; capex £170m; depreciation £100m; cost of capital £230m plus uprating £700m; removing the banding £460m; and retrospectively increasing depreciation in the previous period £650m.

with 50-50 sharing outside that band had appealing features but would reduce efficiency incentives. The definition of profit or rate of return would be problematic and perhaps not effective.

Geoff concluded that "our next steps must be to take decisions on these various items which we hope will be robust to MMC conclusions." Agreed, but I was concerned about the proposed change in stance on initial asset uprating, which I did not fully understand.[88] In our August 1994 price-control proposals, the uprating of flotation values had served to nearly align initial asset values with CCA valuations, which thereby met the substance of the RECs' concerns without conceding CCA valuation itself; but the precise rationale for uprating in the proposals had passed more-or-less without comment.

Some of the subsequent media focus was on our alleged estimates or mis-estimates of opex and capex, or on secret reserves that we had failed to find, but mostly it was simply that the RECs had "got away with it", as evidenced by the share price increases. So now to highlight the uprating assumption to explain a change in the price control might seem odd and would put the focus on something that had not been acknowledged in our October 1993 Consultation Paper.

Moreover, the explanation would also be uncomfortable, whichever items we changed. Either I had made a mistake -- which on further reflection and without reference to new evidence, I now acknowledged. Or I had intended to favour the RECs, and on reflection regretted it.

### 30. Responding to the MMC report on Scottish Hydro-Electric

On 15 June 1995 the MMC's report on SHE's price control was published. It endorsed much of what we had proposed for SHE and the RECs; for example, on opex and cost of capital. It allowed SHE about 10% more capex than in our proposals -- in large part to produce better quality of supply to customers in outlying areas. The North of Scotland Consumer Committee had supported this additional investment, but I had decided against it. In retrospect I misjudged that issue. This is the kind of trade-off where customer views should be given great weight.

On two other issues the MMC took a different view from us: First, in calculating efficient opex we had included an average level of restructuring costs -- about two-thirds of which was the costs of making staff redundant. The MMC, in contrast, decided that such costs should not be allowable in calculating SHE's price control: The redundancy programmes should be self-financing out of the savings that would be made in future years. Second, the MMC rejected an adjustment to SHE's initial flotation asset value to reflect the change in SHE's cost of capital.

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[88] In subsequent exchanges, Geoff explained that we could defend an uprating of about 25% but not 50%. Michael argued that we could defend 32%. I had only a hazy sense of these arguments and could not have explained and justified the calculations to anyone else. They seemed a step away from the apparently simple principle in our initial October 1993 Consultation Paper, that flotation values were more appropriate than CCA values.

I was now able – indeed obliged – to consider the implications of this MMC report for the REC price control.[89] There was no reason to change the earlier assumptions on opex, which the MMC had endorsed. The MMC's increase in SHE's capex allowance helpfully offset suggestions that I had been too gullible on that issue. There was no basis for increasing, or for further tightening, the capex assumptions for the RECs. And there was no reason to change the earlier cost of capital assumption, since the MMC had endorsed 7%.

I did not have a strong view on the restructuring cost issue, but the MMC's view provided an opportunity to make a corresponding reduction in that cost allowance in the REC price controls. To reflect this in the price cap, rather than increase the initial Po price reduction, I chose to increase the X value from 2 to 3, which would "provide a greater sense of continuing benefit to customers and continuing pressure for greater efficiency" (OFFER 1995, para. 8.7). It also addressed the Consumer Committee concern that "X is only 2".

The MMC's decision on the adjustment to SHE's flotation value was a second bonus, because it provided an opportunity to revise significantly this aspect of the REC price control without loss of face for any party. Indeed, the MMC said there was a *prima facie* case for the approach I had taken to SHE -- although on balance it decided on an alternative approach. The circumstances of SHE and the RECs were admittedly somewhat different, with initial controls set by different branches of Government that used different criteria. And in the case of SHE, no adjustment to flotation value meant no downrating -- hence a less onerous price control than I had proposed - whereas in the case of the RECs no adjustment to flotation value meant no 50% uprating, hence a more severe price control. But this was an opportunity not to be missed.

However, did it mean no uprate at all? I noted that "there still remain several potentially relevant arguments for an uprate."[90] My decision was to give some limited weight to these arguments, and to reduce the uprate from 50% to 15%. This was by any measure an enormous tightening of the new price control, which itself had delivered a very significant benefit to customers. Nonetheless the revision still left the companies with something tangible -- a 15% uprate -- that they could potentially lose if they appealed this revised control to the MMC.

How to pass through this reduction in uprating from 50% to 15%? One possibility would be to tighten the X value from RPI-2% to about RPI-6%. However, to do so would lead to unsustainably low prices at the end of the price control period. I considered it preferable, instead, to introduce a further Po price reduction of 9% in 1996/97, in addition to the 2% reduction already provided for by the existing X value.

There were also two sets of company-specific adjustments. Three companies had significantly underspent on capex in 1994/5, as compared to the estimates that they had given me just a year

[89] Scottish Power was also said to be looking at the implications for its own control. I liked the comment in one Scottish newspaper: "But industry sources said that if Scottish Power does receive the benefit of a more favourable price yardstick, it may also have to accept other less favourable revisions of its price control regime in accordance with other MMC recommendations for Hydro-Electric. 'You cannot just open the bits of the Pandora's Box that you like. It's full of snakes as well as plums,' one source said" (*The Herald*, 6 June 1995).

[90] These were: the prospect of rising dividends that would lead to an increase in market values; the risks that were perceived at the time of flotation; the application of uprating elsewhere by the MMC (e.g., in its report on British Gas) and by other regulators; and the importance of avoiding claw-back to maintain the incentives to efficiency.

or so earlier. "It would not be right for these companies to receive a return in future years for assumed capital expenditure that was not in fact made" (OFFER 1995, p. 19). So I increased the 9% one-off price reductions to 10% for two companies and to 11% for another.

Finally, there was the question of the grouping or banding, which I had previously thought prudent. However, with the MMC having published detailed assumptions and calculations, this made banding less plausible. Moreover, our subsequent calculations had revealed the cost of this to customers, in the sense that we had typically averaged up the price caps in each band rather than simply averaged or averaged down. So I decided to reduce the extent of banding.[91]

Eastern and Southern were the two leading companies in the sector and had been particularly concerned about relative positions and unduly favourable treatment of the weaker companies. Reducing banding would help to get them onside; and if they accepted the revised proposals, it seemed less likely that the weaker companies would challenge the proposals.

It so happened that Northern had benefited most from the banding, so unwinding it imposed the largest price reduction on Northern. Given the trouble that its second defence document had caused, this did not keep me awake at night -- although admittedly this document was the catalyst that finally enabled the reopening of the price control review, the important revisions to the control, and the relatively painless solution to an increasingly awkward problem.

### 31. Closure

The net effect of all these modifications was an additional one-off price reduction of between 10 and 13% for the forthcoming second year of the control (in addition to the previously stipulated X = 2%), followed by a reduction of 3% rather than 2% a year for the remaining three years of the price control period. Media views were mixed but broadly supportive:[92] "Just about spot on" was an unfamiliar but welcome judgement.

The stock market took the new proposals in its stride, with the net change in price not statistically significant (Pallett 1998, p. 47). From our perspective at OFFER, it had begun to seem that REC share prices would keep rising no matter what one threw at them. But at least the stable share prices meant that the RECs were less able to challenge the revised price control. And they were not minded to do so: They could sense the public mood. They all accepted the revised price control, which was implemented shortly thereafter. The RECs were constructive throughout the revised review, accepting that something would have to be done. It was all a bit

[91] "A relaxation of 1% is indicated for Eastern Group and Southern Electric, a further tightening of 1% for East Midlands Electricity and Yorkshire Electricity, and a tightening of 2% for Northern Electric, again relative to the uniform 9% tightening discussed above" (OFFER 1995, p. 19).

[92] "The National Consumer Council has declared itself dissatisfied with the plans for future cuts, which, it states, do not go deep enough … Yet it is difficult to see how it is better placed than Prof Littlechild to judge likely circumstances two, three and four years hence. … For the moment, we should welcome the prospect of smaller bills – and urge this belatedly snapping watchdog to keep up the good work" (*Daily Express*, 7 Jul 1995). "While it is true that none of the companies is likely to appeal to the MMC against Prof Littlechild's controls, they were tighter than virtually all of the companies and their investors had expected. … But perhaps the most telling point is that virtually all analysts believe a tougher review would have been successfully challenged at the MMC. 'This time [Prof Littlechild] got it just about spot on', said one" (*Financial Times*, 8 Jul 1995).

of a kerfuffle, but Peter Carter observed that we would never have been able to secure anything like the final price reductions the first time around.

### 32. Looking back on the distribution company regulatory process

From the perspective of three decades later, what to think of this process? There were obviously problems; but in retrospect I am generally comfortable with most aspects of the process that we adopted. The timetable was condensed compared to later regulatory practice, but we and the companies had many other things to do. We gave careful thought to: the price-control process; continuation of the RPI-X model; the criteria for setting X; dialogue with the companies; choice of a relatively explicable model for calculating the costs to be covered by the new control; our assumptions about present and future opex, capex, and the cost of capital; the innovative decision to introduce immediate Po price reductions as well as X; and later the decision to put most of the price reduction on Po rather than X.

But was this nonetheless a "botched review"? If so, why and in what respect? What could and should I have done better or differently? This section explores five main issues and culminates in the question, "Was it all worth it?"

#### i) Confidentiality and strategic assumptions

On reflection, we were naïve to assume that confidential price-control information that was given to 12 companies would not leak. The leak in April 1994 led to a dramatic and immediate fall in electricity distribution company share prices, after which those prices reflected what I considered would be an unduly pessimistic expectation about future revenues and hence profits and dividends.

Moreover, because of the subsequent enforced confidentiality, these share prices now became, not exactly frozen, but heavily influenced by this unrealistic expectation, until some further information about the price control appeared. Although the stock market in a sense continued to convey a message about investor expectations, those expectations were singularly ill-informed, biased downwards and static.

Conventional practice nowadays is to make such price-control communications public. Customers, investors, stock markets, the media, and the public are thereby better informed.

What about the strategic use of low-cost initial assumptions to challenge the companies' initial business plans? With full confidentiality, that seemed well-suited to arguing to the companies that their assumptions were unrealistic and showing that, over time, I was gradually accepting some of their own arguments, and we were working our way to a mutually acceptable solution. But with more openness, such a strategy would suggest that the companies were gradually beating down the regulator and the regulator was gradually abandoning the customers.

One of my aims in the final part of this paper is to encourage a customer negotiation process that does not put the regulator so much at the forefront of influencing expectations.

#### ii) The planning of price control work

Henney (2011, p. 227) argues that the price-control work "was started too late, and then undertaken in haste with too few resources. No thought had been given to standardising the accounting nor to requiring the RECs to prepare basic planning data in a standard format and in good time."

Our "post mortem" recognised that we could have benefited from more time -- although we had many other things to do, not least to reset many other price controls. More resources in-house would have been useful, and seemed preferable to outside consultants. We considered standardisation but decided that the RECs' accounting data were sufficient, and sufficiently uniform, for our purposes at the time. It would be costly to impose and monitor a regulatory constraint on how companies organised their accounts. I thought it preferable to let them develop commercially, beyond the previous nationalised industry restrictions, possibly exploring different directions.

In fact, neither we, nor the companies, nor analysts had any strong evidential basis for assessing future efficient costs -- as several industry colleagues have since acknowledged.[93] So it was essentially a matter of what could be plausibly argued in the event of an appeal to the MMC.

I took two subsequent steps to improve the process for subsequent price control reviews. One was to appoint a senior financial adviser from a merchant banking group with greater experience of financial markets than we had in-house. The other was to appoint "three wise men": very senior and experienced businessmen (initially including the chairs of BP and the Post Office). Their role was to sit in on relevant price-control meetings with companies, to question the companies and our consultants, and to advise me on what future cost reductions would be realistic. I felt that this would reduce the possibility of the companies' trying to bluff us, while at the same time providing companies with some reassurance of a reasonable and informed approach. Both of these steps worked well.

### iii) Missing data?

Jamison (2015) explores the economic and political realities of regulation and presents a brief but stimulating account of the initial distribution price-control process.[94] He is absolutely right as to "the media and political firestorms that soon followed", and on the intertwining of political and economic realities, and on "the importance of a regulator defending the integrity of the process in the presence of political and public pressures". And he makes a good point about convergence between the past and future, as will be explained below.

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[93] "Analysts were inexperienced in the complexities of the distribution business and their analysis was as a consequence somewhat superficial" (John Roberts, CEO, pc 2 Oct 2023). "Analysts were stumped by the lack of metrics to compare the different companies. Most analysts resorted to picking winners and losers by the eloquence, or otherwise, of the management teams" (Tony White, analyst, pc 2 Oct 2023). "In the earlier reviews, NO ONE knew what efficient costs were - neither regulators NOR companies. There was a lot of experimentation going on, not least around contracting out of activities (much of which was pretty disastrous). The overall implication was that everyone was flying blind. One effect of this was to create a 'wild west' in forecasts and huge gaps between regulator and company views of future efficient costs" (Tim Tutton, consultant, pc 5 Oct 2023).

[94] His initial scene-setting is accurate except -- importantly -- that the price-control proposal explicitly did *not* "claw back profits". The failure to do so turned out to be a significant part of "the problem" as the media saw it.

However, a central claim – that “Good, well-understood data were missing from the UK regulator’s initial price review” (p. 18) – is unsubstantiated and was argued above to be incorrect.[95] Nor can it be argued that “Reality was known by investors, as the stock market revealed, but was unknown by the regulator” (p. 18). The stock market was singularly ill-informed about my price-control thinking at this time; and although the stock market may have reflected prospective gains to investors (e.g., from takeover), I regarded these gains as not relevant to the price control, rather than “unknown”.

**iv) The tension between incentive regulation (efficiency?) and fairness**

The price-control process surely illustrated the tension between two different views of the nature of the price control and the duty of the regulator. The media and the opposition Labour party saw what they regarded as excess profits that developed soon after privatisation in all sectors and looked to regulators to deal with this immediately. As one paper put it “Professor Littlechild is there to see a fair division of gains between customers and shareholders” (*Daily Telegraph* City Editor, 22 February 1995). Proponents of this view could not understand (or claimed not to) why I did not see these excess profits, and why I was not investigating and acting to prevent them and/or to redistribute a fair share of them to customers.

This is not an unreasonable view. As Oftel (1988) observed, it seems broadly consistent with traditional US cost-of-service regulation. The regulator sets prices to yield a reasonable profit, but no more. As and when it seems that profit is excessive or insufficient, the regulator is pressed -- and expected -- to intervene to reduce or increase prices. It is not implausible to describe the process as aiming at a fair division of gains between customers and shareholders.

But I took an alternative view, which reflected the then-novel thinking that underlay incentive regulation: Continually adjusting prices so as to ensure “a fair division of gains” would be a disincentive to efficiency. If, instead, prices could be set and maintained for a series of fixed periods, the company would have a greater incentive to become more efficient, and the resulting profit could then be shared with customers.

On this basis, excess profits were a temporary phenomenon: a harbinger of customer gains to come. To intervene to reduce these profits prematurely would discourage future steps to increase efficiency, which in turn would be against the interests of customers. In a sense, I was looking to a fair division of greater gains over a longer term.

The Electricity Act 1989 made no mention of fairness: it allowed for either interpretation. So, to amplify Jamison’s wording slightly, the first electricity price review in the UK did indeed provide a moment in regulatory history where what we had learned from the past (cost of

[95] The main change in the tighter price control that was eventually proposed was not determined by new “data” that were available but previously missing from our review, nor was it a revised estimate of some future cost or of the cost of capital. Rather, it was an adjustment on a technical issue -- the extent of the uprating of flotation value -- so as to reflect the new verdict of the appeal court (the MMC). This was used to rebalance the interests of companies (and their shareholders) and customers, given that the previous proposal was widely seen as not “fair”. Something had to be done to put it right. How much that something should be, was unclear. This particular change to the proposed control, from 50% to 15% uprate, was worth about £1 billion. Did that feel about right? Yes.

service regulation) and what we hoped for the future (incentive regulation) converged and nearly exploded.

The media argued that I was failing to regulate properly, not realising or caring what was happening to profits, and thus not doing my job. I argued that I *was* doing my job because I was maintaining the incentive to greater efficiency which would soon be reflected in lower prices to customers, and premature intervention would remove or reduce that incentive.

I thought that I delivered enough price reductions in my August 1994 proposals to persuade customers that I was acting in their interest. But the media said it can't have been enough, because share prices increased and the companies still looked too profitable. This was primarily because I had not extracted the excess profit from previous years.

There was never really a meeting of minds on this key issue. There did, however, seem to be a tacit agreement that my second price-control proposal in July 1995 was acceptable. For the media, arguably, it was not only that I had delivered more for customers, but that I had now hit the companies hard enough. From my point of view, I had managed to secure acceptable price reductions -- based not on clawing back previous profits nor "taxing" other income, nor on changing my mind because I now realised I had been wrong -- but on defensible forward-looking assumptions that were related to the regulated business, revised in light of the MMC's report on SHE's appeal, and consistent with incentive regulation. Thus, life could move on.

But with the benefit of hindsight, should I have intervened earlier, either to reset the Government's initial RPI+X cap or to secure some explicit benefit for customers? Probably Yes. It would have been more difficult while the Secretary of State for Energy who oversaw the REC flotation was still in post. But on 10 April 1992 he was replaced by Mr Heseltine, who was also more interventionist by nature.[96] I now think that some accommodation could have been reached with the RECs – for example, a one-off price reduction or 'customer dividend' – to address customer concerns about profits resulting from the under-forecast of inflation and consequently lax initial price control. This could have been done without significantly reducing the incentive to efficiency, increasing the cost of capital or compromising regulatory independence. My further suggestions (section 34 below) seek to make companies and price controls more responsive to customer concerns without the need for explicit regulatory intervention.

### v) Was it all worth it?

Initially, the Government had set X values too generously, so as to facilitate privatisation. But after that the incentive-regulation approach showed its metal. "In aggregate, the total operating costs of the distribution businesses fell from about £2830m in 1994/95 to about £2270m in 1997/8, a real reduction of about 20% - finally RPI-X was working!" (Henney 2011, p. 226).

[96] He said that he would "intervene before breakfast, lunch, tea and dinner" to promote the interests of UK plc.

But that was just the beginning. In total, the Po and X price reductions in the second and third distribution price controls – that is, over about a decade - amounted to over 50% in real terms.[97] For transmission in England and Wales the reductions amounted to about 40% over a slightly earlier and shorter period.[98] I commented, "I am not aware that any other country can match the sustained efficiency improvements in the England and Wales transmission and distribution businesses" (Littlechild 2001). And there were other benefits to customers.[99] The combination of privatisation and incentive regulation changed the electricity company culture that had obtained for half a century, as remarked to me at the time.[100] "The RECs surprised themselves by the scale of cost efficiencies they could, and did, achieve." (Tony White, analyst, pc 2 Oct 2023). The same point has now been strongly endorsed by two former company executives.[101,102]

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[97] 1995 Po average = 14%; 1996 Po average = 2% + 11.5%; 1997-9 X = 2%; 2000 Po average = 15.5% (24.5% less 9% transfer of metering assets to supply); 2001-4 X = 3%. See Domah and Pollitt (2001) for more depth.

[98] 1993-96 X = 3%; 1997 Po = 20%; 1998-2001 X = 4%.

[99] One of the media concerns had been my apparently ignoring the significant and unexpected £3 bn increase in the value of NGC, which meant that the shareholders of the distribution companies, as owners of NGC, were held to be accumulating unexpectedly and undeservedly high benefits. But this was Government rather than regulatory territory since the DTI held special shares in NGC. The Government wanted domestic electricity customers to obtain a visible benefit from the flotation, and eventually negotiated a discount of £52 on their electricity bills for over 20m domestic customers.

[100] The chairman of Manweb said to me at one point, "We were concerned that your price cap proposals would necessitate making some staff redundant. In the entire history of this company, no one has ever been made redundant. But we decided to offer a voluntary redundancy package and thought that, if about 5% of staff said Yes, then things would be OK. In the event, about 95% said Yes."

[101] "…we [NGC engineers] were excited by opportunities to be recognised and rewarded for finding better ways than those handed down from the CEGB. … [RPI-X] changed the thinking of those working in the network industries where absolutes in terms of meeting rules were replaced with a recognition that many aspects of design and delivery would benefit from a deeper consideration of the potential risks and benefits of designing bespoke. There was a new can-do attitude towards customers and end-consumers (nascent and much in need of practice) and to my mind this was led and encouraged in NGC by [chairman] David Jefferies who made it clear that if we were to succeed as a company it was because we helped make the new restructured industry a success. … OFFER was just a few economists whereas there were massed ranks of engineers in the industry armed with the relevant information, but I think there was a wide sympathy with what you were trying to achieve with incentive-based regulation (perhaps strengthened by the aligned personal incentives resulting from share-ownership and performance related bonuses). …[T]he key thing you established in the early years of the newly restructured electricity industry was the recognition that we in the industry were responsible for our decisions and performance in a system where you were seeking to align our incentives with those of our customers and end-consumers rather than tell us how to do it. To my mind, that stance within the industry was a significant ingredient in achieving the very substantial efficiency gains that you highlight" (Lewis Dale, NGC executive, pc 9 Oct 2023).

[102] "The state of the SWEB network [SWEB was one of the RECs] was appalling in a number of locations and the extent of minutes lost for some of these was totally unacceptable. Although some of this was self-inflicted, SWEB had been starved of investment by successive governments … The process of privatisation and price controls ignited a voyage of discovery to really understand the true costs of running the business. It was soon realised that in order to do this the organisation of the early 70s, that was still in place, needed to be dramatically changed. It was delayered, with a functional structure run from the centre - once strategy had been declared it meant strategy was implemented, it was no longer optional as it had been for many years. It was also very obvious that activities such as electrical appliance retailing, electrical contracting, and appliance servicing relied heavily on subsidies from the main business in the name of customer service. For too long the local kingdoms, governed by the then area managers, had been very successful in not dealing with the real issues of poor efficiency and productivity. The area managers had to go, and go they did …SWEB had one of the highest [initial] RPI+X outcomes and the subsequent much needed investment enabled the worst served areas to start seeing big improvements with reductions in minutes lost through asset replacement, additional network monitoring equipment, and extended remote network control. Working practices in fault conditions were also improved by

Back in the early to mid-1990s, if anyone had conjectured that private ownership plus an incentive price control could halve distribution business costs in a decade, and almost halve transmission costs, no one would have believed it. The media would still have been more concerned about the companies' having "too much jam" today, as was noted also in the US literature (Sappington & Weisman 2021, p. 3).

Consequently, suggestions for a revised regulatory approach to facilitate a further transition without undue conflict seem worth exploring.

## 33. Regulatory experiences since 1995

Many new ideas in incentive regulation have been tried in the UK, Australia, New Zealand, Canada and the US.[103] A full review of these experiences and innovations is beyond the scope of this paper (but see the other papers in this issue). Nonetheless, a few remarks on experience to date -- mainly in UK -- will inform some suggestions for a possible way forward.

First, efficiency is no longer the main issue, as it was in the 1980s when privatisation and RPI-X regulation were first proposed. Half a century of nationalisation had led to significant inefficiency and was a prime reason for privatisation. Telecoms and electricity were probably the most efficient and forward-thinking of all the nationalised industries. Yet, as was just noted, the post-privatisation price caps roughly halved the price of electricity distribution over 10 years. But for the next decade after that, the subsequent price caps reflected no significant price reduction, on average. The major inefficiencies had been eliminated. The incentive price cap had done its main job. Going forward, efficiency is still relevant, and a range of incentives should still be considered, but they no longer need to drive the structure of the whole control.

Second, and partly in consequence, abstaining from intervention for significant fixed periods no longer seems tenable, if indeed it ever was. If profits seem excessive, customer groups and the media find this intolerable, while if losses are in prospect companies will reduce investment. Later price caps have therefore included earnings sharing and financial reopeners. But events, ideas, knowledge and policies are evolving faster than ever. Regulation, too, needs to respond faster.

Third, experience has shown the advantages of allowing customers and others to play a greater part in setting price controls. From the mid-2000s onwards I reported on the practice of negotiated settlements in parts of the US and urged UK regulators to follow suit.[104] The Civil Aviation Authority's constructive engagement at airports, developed by Harry Bush, and the Scottish water regulator's Customer Forum, developed by Alan Sutherland, were particularly encouraging (Civil Aviation Authority 2005, Littlechild 2012, 2014b, Duma et al. 2024). Other

being able to devolve network control to areas where faults were clustered. On the Supply side, we started to really get to grips with all the local offices, their different working practices, nepotism and local custom. We went from 8 local offices to 1, and within 18 months of completion, we went from worst to 1st in the customer service industry league tables" (Derek Lickorish, SWEB executive, pc 24 Oct 2023).

[103] Performance-based regulation (PBR) has been less widely adopted in US electricity distribution than in telecommunications (Sappington and Weisman 2016). See, however, Joskow (2024) and the PBR process for the four Hawaiian electricity companies, developed over 2018-22, at https://puc.hawaii.gov/energy/PBR/.

[104] E.g., Littlechild and Doucet (2006), Littlechild (2012, 2014a, 2019, 2021) and more references in the last item.

UK regulators created roles for consumer groups to challenge the companies and/or to advise the regulators.[105] Some Australian regulators went further.[106]

This participatory process has generally been beneficial, in terms of the perspectives and pressures that these groups brought to bear. And companies have generally responded positively, although regulators have not always taken sufficient notice.[107]

Fourth, despite the ever more sophisticated (and lengthy) price control processes, there are still tensions – sometimes outright disagreements – during and after the review process. Companies still frequently appeal to the CMA against the regulators' judgements. And often there is growing customer dissatisfaction with the price control over time, not least because the level of the control subsequently seems to be too lax: The companies have done better than the regulator expected. Cost of capital is a particularly sore issue, which some suggest should have been tackled earlier.[108] Such differences of view are an ongoing and unresolved problem.[109]

The UK regulatory process, and the resulting price controls, are more intense and sophisticated – and more costly -- than they were three decades ago; and the performance of the UK-regulated companies is markedly better than that of the previous nationalised industries. The same is no doubt true in other countries that use incentive regulation. [110]

Nevertheless, there is now an agreed need to modify the regulatory process to meet the new and uncertain environmental challenges of the future. Ofgem's recent consultation invited views on, inter alia, the potential role of negotiated settlement.[111] Network companies were

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[105] See Bush and Earwaker (2015), Hahn et al. (2020), and Duma et al. (2024).

[106] See Littlechild and Mountain (2015), Ananda et al. (2022), and Havyatt (2022).

[107] Most recently, Ofgem in effect rejected the full business plans that reflected comprehensive engagement between each electricity distribution network and its stakeholders and its formal Customer Engagement Group. Northern Powergrid (NPg) appealed to the CMA and won on most counts (Final Determination, 21 Sept 2023).

[108] "I am struck by how little attention you pay to setting the cost of capital, and in particular a WACC that is a massive incentive for financial engineering, setting a cost of debt too high and a cost of equity too low. It is incredibly damaging to equity, and debt encourages managers to be anything but entrepreneurial" (Dieter Helm, pc 11 Oct 2023). "In addition to RPI minus X, leverage regulation is needed to prevent the incentive to underinvest. Interest payments should not exceed some multiple of profits before interest and tax. You also need control of payout ratios. With leverage set, this is a function of the level of investment. If the business plans involve sufficient investment and their plans are met, payout ratios are controlled" (Andrew Smithers, pc 3 Nov 2023). I can only plead that the MMC appeal body had opined on cost of capital at the time I was setting price controls, and that the main problems arose after my time.

[109] Thus, "The true costs of risks (including betas and equity risk premiums) and optimal gearing remain elusive and controversial to this day" (Chris Harris, pc 16 Dec 2023). To illustrate the ongoing differences of view, the UK National Infrastructure Commission (2019) proposed that regulators should "aim off" by assuming greater improvements in efficiency (an "outperformance wedge"), or lower costs of capital, than they considered most plausible. However, the CMA (2021 p. 4), when it determined the RIIO2 price control appeals, very explicitly rejected such an approach. "We have found in favour of all appellants that GEMA [governing body of Ofgem] was wrong to impose the outperformance wedge." That CMA decision was in turn criticised in the RIIO-ED2 Challenge Group Independent Report for Ofgem on RIIO-ED2 Business Plans, 8 February 2022, p. 7.

[110] Interestingly, after the US Southern Company took over Southwest Electricity Board (SWEB), the new CEO (from the US parent company) reportedly did not want a staff exchange scheme on the basis that SWEB staff "would see just how overblown we are with people in the US" (Derek Lickorish, pc 24 Oct 2023).

[111] See Open Letter on the next network price control review process, Ofgem, 29 September 2022 and responses at https://www.ofgem.gov.uk/publications/open-letter-future-systems-and-network-regulation. Also Consultation on frameworks for future systems and network regulation: enabling an energy system for the future, Ofgem, 10

generally sceptical; but several customer, environmental and engineering groups were supportive of extending its use. Ofgem now sees it as consistent with any of the possible approaches rather than as a stand-alone model.[112]

### 34. Suggestions for an alternative approach

Experience in resetting the REC price caps in 1993-5 suggests the importance of carrying public opinion, responding to unexpected developments and enabling innovation. I suggest three main respects in which setting prices in regulated sectors could evolve (see also Duma et al. 2024).

*First*, an important aim would be to encourage and if possible secure an agreed settlement accepted by all interested parties, rather than assume a regulator-determined price control.

Extensive experience in the US, UK and elsewhere shows that negotiations and subsequent agreements (settlements) between interested parties are feasible -- in some cases after very different starting points -- and are typically much less costly and time-consuming than formal regulatory procedures. The parties are then committed to upholding this agreement, and to building on it in future years, rather than reduced to criticizing and undermining it. Consumer bodies have perhaps been the main counter-parties to the regulated companies, but not the only ones (e.g., constructive engagement between airlines and airports in the UK, which has apparently been successful at all airports except at Heathrow).

Looking forward, a greater variety of citizen groups, environmental bodies and local organisations will have views and participate in negotiations. Admittedly, price control processes today are more complex than in the 1990s. But the GB customer engagement and challenge groups of the last decade have generally been productive, and their scope could be extended beyond business plans.

To achieve agreement, the various parties would all need to take pains to understand and accommodate each other's viewpoints, to take expert advice where relevant, and to make compromises. If not, they would be ignored: by the other parties, by the regulator and, on appeal, by the CMA. Such a participatory process is more likely to build support for future policy than, say, attempting to improve decisions of the regulatory body itself.

*Second*, the parties would monitor the evolution of the agreed policy in light of events, and where appropriate would agree on steps to review and modify it -- rather than feel that they need to leave it unchanged for a fixed period of years. An agreed-upon price or profit-sharing

March 2023 and responses at https://www.ofgem.gov.uk/publications/consultation-frameworks-future-systems-and-network-regulation-enabling-energy-system-future

[112] "3.2. The open letter [of 29 September 2022] also set out negotiated settlement as a standalone model. Upon further reflection, we think that this is best described as a governance and information-gathering feature, consistent with any of the options described in this consultation document. The particular use and form of negotiated settlement warrants attention in the context of each of the following models, rather than as a generic regulatory model" (Ofgem 10 March 2023).

agreement that turned out to yield excessive or inadequate profits might need to be modified sooner than expected. Perceived problems would not be allowed to fester.

By the same token, an agreed-upon investment programme that involves higher costs than expected, or that does not deal adequately with an emerging problem, could be reconsidered. The parties would explore the reasons for the outcomes' being different from expected and seek to agree on a way forward.

Thus, rather than a price-control review once every five years, but taking perhaps three to five years' preparation, there would be an ongoing review process - more akin to how unregulated companies set, monitor, and revise their business plans. The parties would need to consider the impact on incentives. But it would be a continual process of monitoring, discovery, discussion and adjustment: more like the competitive market process than the present regulatory process.

Again, I expect some mutual tolerance would develop over time – each party would come to understand the others' points of view in return for some better understanding of its own position. Consequently, an adjustment in one direction one year might make more tolerable an adjustment in another direction the next year.

*Third*, different companies and their interested parties would do different things. There would not be a uniform approach that is determined by the regulator. Some companies and their interested parties might aim at a five-year control; others might aim at a three-year control; yet others might adjust the control from year to year (with regime parameters reflecting differences in risks and other relevant factors). Some might place great weight on comparative statistics of efficiency or investment; others might not. There would not be an expectation of a simultaneous and comparative regulatory review of all companies every five years or so.

Would this reduce the scope for "comparative competition"? On the contrary, I would see it as increasing the scope for a rivalrous (Austrian) competitive discovery process: exploring more ideas; conveying more information; enabling all parties, not least the regulatory body, to learn faster about what approaches work best -- without restriction as to uniformity or simultaneity.

### 35. The resulting role for regulators

Would industry regulators be out of a job? Alas not. Depending on the circumstances, regulators might need or wish to take various steps to facilitate the process of discovering the best form of regulation.[113] They would presumably find it sensible to indicate policies that leave scope for the parties to meet any required conditions in different ways and would learn over time what kinds of initial views and policy guidance are most conducive to satisfactory agreement.

[113] For example, regulators might indicate various issues to be addressed within a specified timescale; indicate their own provisional views on particular topics: for example, those where they have statutory obligations or Government policies to deliver; collect and provide data on particular issues; publish comparative data to facilitate assessment of company plans and performance; finance research and advice on matters of common interest, such as the cost of capital, that might be beyond the scope of consumer or other bodies; provide advice on such issues as seem important to them or as they perceive are important to the Government or a matter of national policy; and generally facilitate discussion and a meeting of minds.

They would need to approve the final plan, before incorporating relevant elements into the licence to make it enforceable. And if the various parties nonetheless failed to agree, they would need to consider the different opinions and set the price control accordingly.

In 1980s UK, we had bold ideas for releasing the nationalised industries from Government control and creating more competitive processes. RPI-X incentive regulation was to be a means of protecting customers, and over time transferring to them the benefits that resulted from the improved incentives provided by private ownership and competition.

But setting and resetting RPI-X controls proved more challenging than expected, and some of the experiences that have been described in this paper may instead suggest "how not to do it". The original and simplest efficiency goals were achieved, and customers benefited; but there were also problems.

Regulatory processes have continued to evolve, exploring a wider range of consultation and incentive mechanisms. Nonetheless, regulation has become increasingly time-consuming and costly, and (arguably) ponderous; there are continuing tensions among companies, customer and citizen groups, and regulators; and the world is changing ever more rapidly in ways that are likely to increase costs and inconvenience many customers.

I hope that the experience discussed in this paper will provide some encouragement to Government, regulators and companies to explore new possibilities of "regulation with a light rein". Relaxing the regulatory grip could enable a more constructive role for companies as well as customer and other interest groups, and would incentivise a more responsive and mutually acceptable discovery process in the ever-changing regulated sectors.

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