November 2000

Energy Networks Providing Telecommunications Services

A consultation document

Executive summary

A number the companies Ofgem regulates have identified opportunities to provide telecommunications services using the existing assets of their regulated businesses. These developments raise a number of issues for Ofgem, particularly when the regulated business is subject to price controls.

This document invites views on these regulatory issues. In particular it invites views on how the revenues from telecommunications activities should be treated when setting price controls. Three options are identified:

- forecasting future revenues from these ventures at each price control review and allowing the regulated business to retain any revenues that exceed this forecast (Ofgem's present approach);

- reducing allowed revenues each year by a pre-determined fix proportion (eg 50%) of the net income from these ventures; or

- making a one-off adjustment to the regulatory value used to set price controls, in order to reflect projected future income (this option is likely to be most appropriate if the assets that have been financed by electricity or gas customers are transferred to a new telecommunications operation).

Ofgem invites views on these options and the issues discussed in this document.

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1. Introduction

1.1 In regulating gas and electricity markets, Ofgem seeks to promote choice and value for customers, wherever possible through competition. Where competition is not feasible, or not sufficiently developed, Ofgem sets price controls to ensure that companies with significant market power are not able to exploit customers through high prices. Ofgem also regulates the quality of services provided by these companies.

1.2 Where price controls are in place, they are set out in the companies' operating licences issued pursuant to the Electricity Act 1989 and the Gas Act 1986, as amended.

1.3 Companies which currently are subject to price controls include those providing gas transportation, electricity transmission and electricity distribution services. Price controls limit the revenues that companies can earn from providing these services each year. The price controls are reviewed periodically and are normally set for four to five years in advance.

1.4 Controls also exist on the tariffs charged by British Gas Trading and first-tier public electricity suppliers to certain customers, although it is intended that these controls should be removed once competition in these markets has become sufficiently established. However, this document is primarily concerned with the activities of electricity distribution, electricity transmission and gas transportation businesses, which are referred to collectively as "regulated businesses" in this document.

1.5 In 1999 Ofgem reviewed the price controls of the 14 regional electricity distribution businesses and the two Scottish electricity transmission businesses. This year Ofgem reviewed the price controls on the National Grid Company (NGC)'s electricity transmission business and is currently reviewing the price controls on Transco's gas transportation business.

1.6 In addition, by the end of this year Ofgem will have put in place, or proposed, licence conditions which will create regulatory ring fences around these regulated businesses. These ring fences will limit the activities which the licence holders can undertake. The licence holders will be prohibited from carrying on activities additional to the regulated business, unless the size of these additional activities remains within certain financial limits. This is intended to prevent the licence holder from becoming exposed, to a material extent, to the risks arising from unregulated activities. This restriction is necessary given Ofgem's duties under the Electricity and Gas Acts to ensure that licence holders possess the resources necessary to carry on their licensed activities.

1.7 Although Ofgem wishes to limit the activities of regulated energy utilities, it recognises that benefits can arise if regulated businesses are able to use their assets to provide additional services. This can create economies of scope, allowing the same assets to be used to provide more than one service, which can reduce the cost of providing energy-related services to the customers of the regulated business. These cost reductions can provide the opportunity to reduce prices for customers.

1.8 One of the main opportunities for providing these additional services is in the provision of telecommunications services. For example, NGC has established a subsidiary, Energis, which provides telecommunications services using fibre optic cables strung along NGC's network of electricity transmission towers. Energis pays a fee to NGC for the use of certain transmission business assets. (The treatment of these fees in the recent review of NGC's price control is discussed in Ofgem's final proposal document[1].) Scottish transmission businesses have undertaken similar ventures. Transco currently operates a number of radio masts and towers which are used for its internal communications and telemetry. It currently leases surplus space on some of its towers to allow mobile telephony operators to place equipment on them. Transco has announced that it is investigating opportunities to make further use of its assets to provide telecommunications services.

1.9 Given the significant growth in markets for telecommunications Ofgem expects that other energy utilities are likely to exploit the opportunities to provide telecommunications services using the assets of their regulated businesses. The revenues earned from providing these services could potentially become a

[1] *Price Control Review of the National Grid Company from April 2001: Transmission Asset Owner – final proposal, September 2000.*

significant part of regulated businesses' income. A number of licence holders have sought guidance from Ofgem on how the income from providing such services will be treated in future price control reviews.

1.10 This document sets out the regulatory issues arising from these ventures. It invites views on how Ofgem should treat revenues from these ventures when setting price controls and how Ofgem can ensure that the provision of such services does not adversely affect the quality of services provided to customers of the regulated business.

1.11 The issues discussed in this document may also be relevant to other services which regulated businesses provide using the resources of the regulated business. However, This document is concerned only with the activities of licence holders themselves, and not with the activities of affiliates that operate outside regulatory ring fences.

1.12 Views on the issues raised in this document are invited by 15 January 2001 and should be addressed to:

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1.13 Responses will be placed in the Ofgem library unless clearly marked as confidential.

2. Regulatory Issues

2.1 The provision of telecommunications services raises a number of issues. The regulatory issues discussed in this document can be grouped under two headings:

- the treatment of income from providing telecommunications services when setting price controls; and

- the impact on quality of service and future investment by the regulated business.

Price control issues

2.2 When setting price controls, Ofgem seeks to create broadly the same incentives on regulated companies as they would expect to face if they were operated in competitive markets. In a competitive market, companies will benefit over the short run if they are able to improve their efficiency more quickly than competitors, but over the longer run their competitors are likely to catch up and lower prices to customers to reflect these cost savings. In this way the benefits of greater efficiency are, over time, passed on to customers through the competitive process.

2.3 To achieve similar incentives, price controls are set in advance, usually for a period of four to five years, based on Ofgem's forecast of the level of costs that will be incurred by an efficiently run business. During this period, if licence holders outperform Ofgem's forecasts by achieving additional cost savings, the company retains the benefit of this cost reduction. This provides an incentive on the licence holder to operate as efficiently as possible. At the end of the price control period Ofgem has the opportunity to lower future prices so as to share the benefits of this greater efficiency with customers.

2.4 The treatment of revenues from providing telecommunications services should similarly replicate the incentives on companies operating in competitive markets. Companies should be incentivised to exploit potential economies of scope, but over time customers should share in the resulting financial benefits.

This raises two issues:

- how the financial benefits of providing telecommunications services should be valued; and

- how this financial benefit should be shared between shareholders and customers.

2.5 These issues are considered in Chapter 3 below.

The impact on quality of service and future investment

2.6 Ofgem will need to ensure that using regulated business assets to provide telecommunications services does not impede the ability of licence holders to meet their statutory and licence obligations, and does not lead to a reduction in the quality of service provided to regulated business customers.

2.7 A related issue, which also impacts on the level of future price controls, is the need to avoid creating incentives to over invest in regulated networks. This is because The licence holder might seek additional revenues from customers of the regulated business in order to fund the creation, or the replacement, of capacity devoted to providing telecommunications services. These issues are considered in chapter 4 below.

3. The impact on price controls

3.1 This chapter considers two issues:

- how the financial benefits of providing telecommunications services should be valued; and

- how this financial benefit should be shared between shareholders and customers.

Valuing the financial benefit

3.2 The financial benefit to the regulated business from providing telecommunications services will consist of the income it receives from telecommunications customers less certain costs incurred from providing these services. In valuing the benefit received by the regulated business Ofgem therefore needs to consider two issues: the revenues it receives and the costs it incurs from providing telecommunications services.

Revenues

3.3 In order to avoid any cross-subsidy by customers of the regulated business, Ofgem will be concerned to ensure that the charges levied by the regulated business reflect the market value of the services it provides. This is likely to be of most concern where a regulated business provides telecommunications services to another member of the same corporate group. If services are provided to unrelated businesses, Ofgem will normally expect that the regulated business will have an incentive to maximise the revenues it earns. It will be expected to charge up to the competitive market price for these services. However, if services are provided to another member of the same group, the licence holder may have an incentive to reduce these charges, in order transfer income from the regulated business to unregulated businesses within the same group.

3.4 In principle, existing licence conditions might be expected to prevent such behaviour. Public Electricity Supplier, electricity transmission and gas transportation licences already contain conditions which are designed to prevent cross-subsidies between the regulated business and affiliates. To comply with these conditions charges to a related telecommunications customer should therefore be the same as the charges which would be levied to an unrelated business, reflecting the competitive market value of these services.

3.5 However, the services provided by a regulated business may have unique characteristics, creating uncertainty over the market value of these services – although it may be possible, by making appropriate adjustments to market-based information, to estimate this market value. Ofgem considers that it may be appropriate to review these charges from time to time to ensure that they reflect Ofgem's assessment of the appropriate market value.

Costs

3.6 Providing telecommunications services is likely to involve additional costs, even where existing assets are utilised. Ofgem will need to ensure that the costs arising from providing telecommunications services are borne by telecommunications customers, and are not subsidised by the customers of the regulated business. Ofgem may also need to ensure that the telecommunications business incurs an appropriate share of overhead costs and other common costs.

3.7 If the regulated business incurs such costs, and they have not been included in the operating expenditure allowances used to set the price control, it seems reasonable to subtract these costs from the income received from providing telecommunications services before arriving at the financial benefit to the regulated business. Ofgem may need to review these costs to ensure that they are both appropriate and efficiently incurred.

Sharing the financial benefit between customers and shareholders

3.8 There are a number of alternative ways to divide the financial benefit between shareholders and customers. In considering these different options Ofgem will wish to ensure that the regulated business has strong incentives to exploit potential economies of scope and maximise the income to be earned from such ventures.

Current practice

3.9 Ofgem has already considered this question, most recently during the NGC price control review. In that review Ofgem used the following approach. In setting the next transmission business price control, Ofgem treated the income NGC receives from Energis in the same way that it treats potential reductions in operating expenditure. This involved assessing the future market value of services to be provided to Energis over the next price control period. Ofgem then subtracted these revenues from future allowed revenues when setting the price control.

3.10 Shareholders will therefore benefit from these incomes to the extent that the business outperforms these projections, in the same way that shareholders benefit when the company outperforms Ofgem's operating expenditure projections. This provides strong incentives on NGC to maximise the income it receives from Energis. It is also consistent with the present treatment of other excluded services revenues – for example NGC's revenues from post-vesting connections.

Issues for consideration

3.11 It is for consideration whether the same or a different approach should be applied to future telecommunications ventures. Applying the same approach would be consistent with existing practice for other activities. However, this consistency might not be appropriate. In particular, the time scales over which operating cost reductions are shared with customers might not be appropriate when applied to incomes from telecommunications services where technology may be developing more quickly than in other activities.

3.12 Some regulated companies have argued that current practice by Ofgem allows regulated businesses to retain only a relatively small proportion of the revenues from providing telecommunications services, and therefore provides little incentive to exploit economies of scope.

3.13 In considering other options the following issues need to considered:

- whether sharing should be based on projections made when setting the price control or actual income received each year;

- the proportion of income to be retained by shareholders;
- whether there should be any time lag in the adjustment of allowed revenues; and
- whether a one-off adjustment would be appropriate.

These issues are considered below.

Calculation of income and sharing of income

3.14 Taking the first two issues above, there are four options which might be considered. These are shown in table 3.1 below.

Table 3.1: Options for calculating reduction in allowed revenues

	"Income" calculated as:	
	The level of financial benefit projected when setting the price control	*The actual financial benefit received*
Allowed revenues are reduced by the total level of this income	***Option (i)***	***Option (ii)***
Allowed revenues are reduced by a proportion of the level of this income	***Option (iii)***	***Option (iv)***

- ***Option (i):*** this option is consistent with the current treatment of excluded services revenues as discussed above.
- ***Option (ii):*** under this option, allowed revenues would be reduced each year by the actual revenues the regulated business receives from providing

telecommunications services. This would leave shareholders in the regulated business with no income from the telecommunications services and therefore would provide no incentive for the regulated business to exploit economies of scope.

- ***Option (iii):*** under this option the financial benefit would be shared in some fixed proportion. For example, allowed revenues could be reduced each year by 50% of projected revenues. The regulated business would retain 50% per cent of the revenues projected by Ofgem, as well as the full benefit of any out-performance against this target.

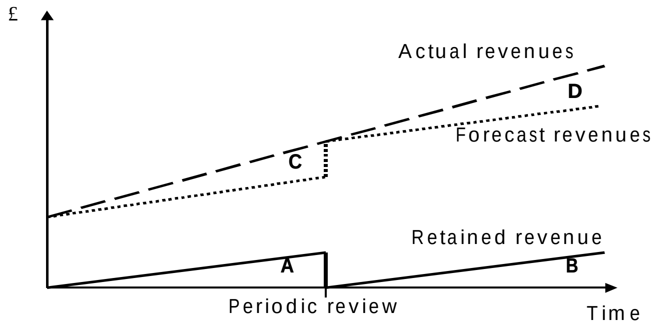
- ***Option (iv):*** the last of these options would involve reducing revenues each year by some proportion of actual revenues earned. This would remove the need for Ofgem to forecast such revenues.

3.15 Ofgem considers that option (ii) would be inappropriate as it would remove any incentive on the regulated business to exploit economies of scope.

3.16 Options (iii) and (iv) would require Ofgem to decide on the proportion of the financial benefit by which allowed revenues should be reduced. Increasing this proportion would increase the return to customers, but also reduces the incentive on the regulated business to exploit economies of scope. Balancing this trade-off is likely to require a difficult judgement, and it may therefore be most straightforward to reduce allowed revenues by 50 per cent of net telecommunications services income, leading to an equal division between customers and shareholders.

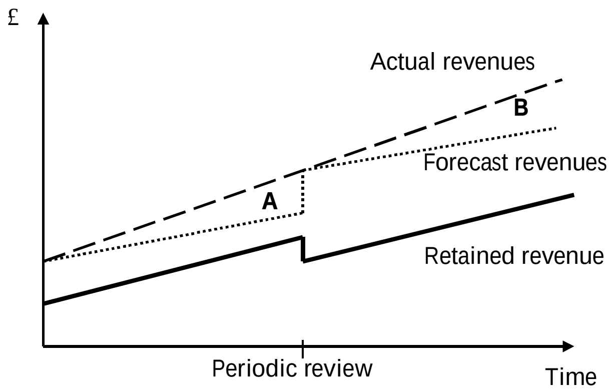
3.17 If option (ii) is excluded the impact of the remaining three options can be illustrated by the diagrams in figure 3.1, 3.2 and 3.3 below. These diagrams illustrate the pattern of retained revenues for the regulated business, although the size of revenues will depend on the rate at which actual revenues and Ofgem's forecasts grow. These diagrams assume that revenues from telecommunications services are forecast to increase by 50 per cent between price control reviews but that actual revenues increase at twice the rate. Different assumptions would affect the comparison between these options.

Figure 3.1: Retained revenues under option (i)



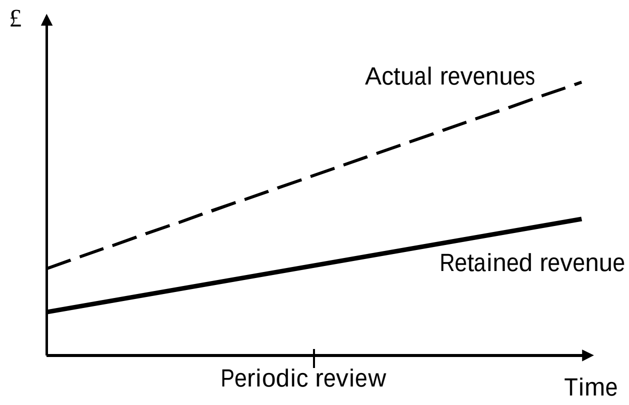
3.18 Under option (i) the level of retained revenues (shown by areas A and B in figure 3.1) equals the difference between actual and forecast revenues, (shown by areas C and D).

Figure 3.2: Retained revenues under option (iii)



3.19 Under option (iii) the regulated business again retains the whole of the difference between actual and projected revenues (areas A and B in figure 3.2). But in addition it retains 50% of the forecast level of income.

Figure 3.3: Retained revenues under option (iv)



3.20 Under option (iv) there is no projection of future income, and the regulated business simply retains 50% of actual income from telecommunications activities.

3.21 It can be seen that option (iii) leads to higher revenues than options (i) or (iv), and this will occur whatever assumptions are used. However, the difference between options (i) and (iv) depends on the rate at which the company outperforms the forecasts made by Ofgem.

Use of a time lag

3.22 In practice, under option (iv) neither Ofgem nor the regulated business will know the actual level of its telecommunications services income until after the end of the relevant year. It will therefore not be feasible to adjust allowed revenues each year accurately to reflect telecommunications income. This problem could be overcome by introducing a two-year time lag. This would mean that allowed revenues for the next year are reduced by net telecommunications income during the previous year, which would be known. In the long run this would not alter the level of incomes retained by the regulated business, but it would delay the impact of an increase in telecommunications-related revenues by two years.

One-off adjustment

3.23 An alternative approach would be for the regulated business to make a one-off transfer to customers. This might be achieved through a one-off reduction in charges, or by a one-off reduction in the regulatory value used to calculate the return on capital and depreciation allowances on which allowed revenues are based. This adjustment could be calculated so that its net present value equalled the net present value of expected net telecommunications services revenue, after taking account of shareholders' investment in such projects. The regulated business would then receive the benefit of any out-performance against this target, or bear the costs of any under-performance in perpetuity. There would be no adjustment at the next price control review. This option may be the most appropriate solution where the regulated business disposes of assets used to provide telecommunications services or securitises its future telecommunications-related income.

Ofgem's initial views

3.24 In considering the merits of these various options Ofgem will wish to maximise the incentives on the regulated business to exploit economies of scope but will also wish to secure an appropriate return for customers. In the short run there may be a conflict between these objectives, since while increasing the proportion of telecommunications income retained by shareholders will increase the incentives on the regulated business, it will also reduce the short-run return to shareholders. However, over the long run customers may benefit more if stronger incentives on the regulated business increases, total incomes from providing telecommunications services.

3.25 Ofgem considers that the main choice between the options described above is between:

(i) reducing allowed revenues by the whole of *projected* telecommunications services net revenue, thereby incentivising the regulated business by allowing it to retain any out-performance against these projections during the period between price control reviews (this is the current approach used by Ofgem, option (i) above);

(ii) reducing allowed revenues by a proportion of *actual* net revenues (perhaps subject to a two-year time lag), most probably by 50 per cent of net income. This would incentivise the regulated business by allowing it to retain 50 per cent of actual revenues earned with no adjustment at the time of future price control reviews (option (iv) above); or

(iii) making a one-off adjustment, by reducing the regulatory value to reflect expected future income from providing telecommunications services, again with no adjustment at the time of future price control reviews.

Views invited

3.26 Ofgem invites views on these options, and suggestions for alternative approaches.

4. The impact on quality of service and future investment

4.1 Although allowing regulated businesses to use their assets to provide telecommunications services can lead to lower prices to regulated business customers, it can also raise concerns that it may reduce the quality of services provided to the customers of the regulated business.

4.2 The assets employed by regulated businesses are often of a type where it is difficult to provide the exact level of capacity actually required. Regulated businesses may therefore need to install capacity which is initially spare and, therefore, can be exploited to provide additional services. For example, Transco constructs and operates radio communications towers for its own use, these will often contain spare capacity which can be used to provide services to other businesses.

4.3 However, the “spare” capacity used to provide such services might at some future date be required by the regulated business. Therefore a question arises as to whether such capacity is genuinely spare. The regulated business may also need to devote resources, such as management time, away from the regulated business in order to exploit these opportunities.

4.4 This leads to the following concerns over the impact of regulated businesses providing telecommunications services:

- there could be a reduction in the quality of services provided to regulated business customers; and/or
- the regulated business might seek to undertake additional capital investment in order to replace assets now devoted to telecommunications activities. This may impact on future price levels.

Reduction in the quality of service

4.5 As explained at paragraph 1.6 above, ring fence provisions currently in place, or shortly to be proposed, restrict the extent to which regulated businesses can carry on additional unlicensed activities. In order to provide such services on a significant scale the companies will either require consent from Ofgem, or will need to transfer relevant assets outside the regulated business.

4.6 Transfers of such assets would normally be subject to further licence conditions which either require Ofgem's consent or require the licence holder to establish that there will be no impact on its ability to fulfil licence obligations. Where consents are sought either to transfer assets or carry on unlicensed activities above the current thresholds Ofgem will of course seek to ensure that there is no adverse impact on the quality of services provided to the regulated business.

4.7 In addition, regulated businesses are required to meet various standards specifying the quality of services they must deliver. Ofgem is currently seeking to improve the definitions of these output measures and to improve the information provided on performance and the incentives on regulated businesses to improve performance. In the case of distribution businesses this is being taken forward by Ofgem's information and incentives project, and in the case of NGC and Transco as part of their price control reviews. Ofgem expects that the outcomes of these initiatives should provide additional safeguards with respect to the quality of services delivered.

Replacement of assets

4.8 As explained above, ring-fence licence conditions will limit the use of regulated business assets outside of the regulated business, and other licence conditions exist which regulate the transfer of such assets. In principle, these conditions should prevent situations arising where resources required to provide services to regulated business customers have been diverted into providing telecommunications services.

4.9 Nevertheless, in carrying out price control reviews of regulated businesses providing telecommunications services Ofgem would expect the company to demonstrate that the capital and operating cost requirements set out in their business plans do not involve the replacement of assets now used to provide telecommunications-related services.

5. Way forward

Views invited

5.1 Ofgem invites views on the issues set out in this document, and in particular on the options for the treatment of telecommunications business revenues set out in Chapter 3, by 15 January 2001.

Next steps

5.2 In the light of responses to this document Ofgem will consider whether modifications to the existing or future price control conditions of any licence holders may be appropriate. Such modifications would be subject to statutory consultation as set out in the Electricity and Gas Acts, and the possibility of reference to the Competition Commission if they were not accepted by licence holders.

5.3 However, introducing retrospective changes to existing price control settlements might reduce regulatory certainty with adverse effects on the incentives on businesses to exploit opportunities that are beneficial to customers. Therefore, Ofgem does not intend to propose to alter the treatment of revenues from existing services under existing price control settlements as a result of this consultation (unless such a change is sought by the licensee, and is considered by Ofgem to be in the best interests of customers).

5.4 Ofgem intends to place responses to this document (other than those clearly marked as confidential) in the Ofgem library, and to set out its conclusions in the light of this consultation in March 2001.