

TRANSCO PRICING CONSULTATION PAPER PC42

Metering Charges

SUMMARY

This paper describes Transco's proposals for metering charges from 1 October 1999. At present, metering costs are reflected in the customer charge element of transportation charges, and rebates are available where metering services are provided by an organisation other than Transco. Transco has reviewed domestic meter costs and proposes that the domestic meter rebate remains at £10. No changes are proposed to the methodology used to determine rebates in respect of Industrial and Commercial (I&C) meters, which are presently a function of supply point capacity.

A £10 charge in respect of Prepayment Meters (PPMs) was introduced from 1 October 1998. At the time, Transco indicated that it would continue to monitor PPM costs with a view to consulting on whether it would be appropriate to introduce a fully cost reflective charge. Transco's present analysis shows that the forward looking cost of providing PPM services is £43 per annum, which implies a cost reflective charge of about £30 above that for a standard domestic meter. Respondents are therefore invited to comment on whether it would be appropriate to increase the PPM charge to a more cost reflective level from 1 October 1999.

Finally, Transco proposes to introduce a separate charge for customer-requested meter exchanges in order to facilitate competition in meter work and to better reflect the way that such costs are incurred. It is proposed that a standard charge of £47.83 is made in respect of domestic meters, and that charges in respect of Industrial and Commercial meters are calculated on an individual basis. Transco proposes to introduce such a charge from 1 October 1999.

1. INTRODUCTION

In May 1998 Transco consulted on proposals for:

- rebates of transportation charges where metering services are supplied by an organisation other than Transco, and
- a charge for providing prepayment metering services (see *PC25: Metering Charges*).

Rebates, where metering services are supplied by an organisation other than Transco, were introduced on 6 April 1999. At present, the rebate in respect of domestic meters is £10 per supply point, whilst the rebate in respect of Industrial and Commercial meters is a function of supply point capacity. Section 3 reviews domestic meter costs. No changes are proposed to the methodology for determining Industrial and Commercial (I&C) meter rebates, which are presently a function of supply point capacity. In the longer term, Transco is considering whether it would be appropriate to develop charges for I&C meters that vary with the number and type of meters present.

Following discussions with Ofgas about the level of costs associated with providing prepayment metering services, a £10 charge was introduced from 1 October 1998. Transco indicated at the time that it considers that this charge does not fully reflect the additional costs of providing, installing and maintaining prepayment meters. Section 4 reviews prepayment meter costs and invites respondents' views on the appropriate level of charge.

More recently, Ofgas has published its initial proposals for unbundling Transco's metering activities from transportation and meter reading activities (see *Securing effective Competition in Gas Metering and Meter Reading services, The Director General's initial proposals*, October 1998). Transco is presently discussing these proposals with Ofgas and has stated that it believes that the focus of any unbundling programme should be the early development of competition in meter work, which should take priority over separation of meter assets.

2. METERING REVENUE

Transco's metering charges are designed to generate income in line with the revenue allowed by its price control formula. The methodology used to determine the appropriate revenue for metering charges for 1999/2000 is consistent with that presented in PC25, being based on:

- ABC operating costs
- depreciation, and
- a return on metering assets at a rate of 7%

Revenue and depreciation costs are based on Transco's 1998 Activity Based Cost (ABC) model. Consistent with the general transportation charging methodology, ABC costs have been adjusted to better reflect forward looking costs by excluding special charges and one-off costs, such as restructuring costs, totalling £16 million (for a summary of ABC costs see *PD3: ABC Cost Pools*). Datalogger costs totalling £6 million have also been excluded (for Transco's proposed datalogger charges see *PC47: Datalogger Charges*).

The derivation of metering revenues is summarised in the following table. Transco is proposing a separate charge for customer-requested meter exchanges (see section 5), and so the costs associated with this activity are shown separately.

Table 1: Metering Target Revenue

	£ million			
	Domestic Credit	Prepayment	I&C	Total
ABC Operating Costs	53.9	44.2	17.5	115.6
Depreciation	81.8	20.1	13.6	115.5
Return @ 7%	70.7	17.2	14.4	102.3
Total	206.4	81.5	45.5	333.4
Customer exchanges	7.0	13.3	0.0	20.3
Target Revenue	199.4	68.2	45.5	313.1

However, there is considerable uncertainty about the level of costs and revenues that are appropriate for an unbundled metering business. For example, the costs presented in this paper include an allocation of support and sustaining costs which reflect Transco's present organisational structure, and do not necessarily reflect the costs of an unbundled metering business. Also, unbundling may result in a loss of economies of scale and scope, which may increase Transco's costs.

Ofgas is presently undertaking work to attribute Transco's costs and revenues to its transportation, metering and meter reading activities, and has indicated that it intends to use this work to develop guidance on Transco's charges.

The following sections describe Transco's proposals for:

- rebates in respect of domestic meters
- surcharges for prepayment meters, and
- charges for customer-requested meter exchanges.

3. DOMESTIC METER REBATE

The rebate provided by Transco, in respect of domestic metering services supplied by organisations other than Transco, reflects domestic credit meter costs. There are presently two types of domestic credit meter: the E6 ultrasonic meter and the more common U6 diaphragm meter. To date customers have not been able to choose which meter type is provided and therefore it is proposed that rebates reflect average costs. In the longer term, as competition develops, it is possible that customers will be able to choose the meter type that they wish to have installed and it may therefore be appropriate to introduce separate charges for each meter type.

Table 2: Domestic Credit Meter Revenue

Target revenue (1)	£199.4 million
Number of meters	18.7 million
Target revenue per meter	£10.65

(1) Excludes revenue from the proposed charge for customer-requested meter exchanges.

At present, the rebate is £10 per annum, which is equal to the fixed element of the customer charge in respect of domestic supply points. Increasing the rebate to £10.65 would result in a negative fixed charge - unless the fixed charge was increased by a corresponding amount.

In view of this issue, and the present uncertainty over the future level of metering costs and revenues, Transco proposes that the domestic meter rebate remains at £10 per annum.

4. PREPAYMENT METER CHARGE

The costs of providing, installing and maintaining Prepayment Meters (PPMs) are greater than those associated with domestic credit meters. In 1998 Transco consulted on a proposed charge of £20 as the first phase of a move to reflect these additional costs (*see PC25: Metering Charges*). Following discussions with Ofgas about the level of the cost differential, a £10 charge was introduced from 1 October 1998. Transco indicated that it would continue to monitor PPM costs with a view to consulting on whether it would be appropriate to introduce a fully cost reflective charge.

The methodology described in this section is based on that presented in PC25. However, it has been modified to reflect some of the revised assumptions made by Arthur Andersen in their report on meter charges, produced on behalf of Ofgas (*see Transco Metering charges, July 1998*). Transco's latest analysis shows that the forward looking cost of providing PPM services is £43.22 per annum, which implies a cost reflective charge of about £30 (that is £30 in addition to the £10 domestic fixed charge). The following table summarises this analysis, which is described in more detail in Appendices 1 to 4.

Table 3: Summary of Prepayment Meter Costs

Activity	Cost (£ per annum)
Provide	24.71
Install	7.17
Maintain	11.34
Total	43.22

Discussion of PPM charges frequently raises concerns about the impact of such charges on the fuel poor. However, several papers (such as Oxera, 18 January 1999) have concluded that the relationship between usage of prepayment meters and fuel poverty is unclear. Although usage of PPMs is biased towards lower income levels, it is by no means exclusive to such levels.

Additionally, the present subsidy of PPMs results in higher charges for other consumers, including low income consumers who do not use PPMs. In their response to the

Government's Green Paper on Utility Regulation, Offer and Ofgas quoted the 1995/96 Family Expenditure Survey which showed that 90% of low-income gas consumers do not use a PPM. The regulators said that "a subsidy/levy for prepayment gas customers would mean many other low-income customers, including many pensioners, would pay higher bills" (see *The Social Dimension: Action Plan, Offer and Ofgas Proposals*, June 1998).

Finally, the present subsidy of PPMs would appear to be inconsistent with the development of effective competition in metering services. Transco agrees with the regulators' view that "a levy/subsidy may not sit easily with the rationale of a competitive market" and concurs that it may be more appropriate to provide assistance for PPM consumers through other means.

Respondents are therefore invited to comment on whether it would be appropriate to increase the PPM charge to a more cost reflective level from 1 October 1999.

5. CUSTOMER-REQUESTED EXCHANGES

Meter exchanges are carried out for a number of reasons, including age-related replacement and faults. In addition, an increasing number of meters are exchanged at the request of shippers. At present, most such exchanges comprise exchanges of domestic credit meters for prepayment meters and vice versa. The operating costs associated with such exchanges total £21 million per annum (excluding the cost of refurbishing the old meter). Such costs are presently reflected in the metering element of transportation charges.

As metering competition progresses, it is likely that the number of meter types will increase, resulting in more customer-requested meter exchanges and an increase in costs. If such an increase continued to be reflected in transportation charges, it would result in higher charges for all customers. Therefore, in order to signal the costs of such exchanges and ensure that charges better reflect the way that such costs are incurred, Transco proposes to make a separate one-off charge for customer-requested meter exchanges. It is proposed to introduce such a charge from 1 October 1999.

Table 4: One-off Charges for Customer-requested Exchanges

Meter Type	Charge (£ per meter exchange)
Domestic	47.83
Industrial & Commercial	Individual charge (1)

(1) Consistent with other one-off charges, it is proposed that customer-requested exchanges of Industrial and Commercial meters are charged on an individual basis, reflecting site-specific labour and materials costs.

Appendix 5 shows how this charge has been calculated.

Such a charge is consistent with existing one-off charges for work carried out at shippers' request, including meter repositioning, discontinuance and accuracy tests. Such a charge is also consistent with Transco's objective of facilitating competition in meter work activities. If it were implemented, Transco would expect to work with the industry - as part of the ongoing

unbundling discussions - to develop the necessary processes to enable organisations other than Transco to carry out such work.

If the proposed charge was implemented, Transco would take account of the expected income when setting other charges. For the avoidance of doubt, it is proposed that costs associated with all other types of meter exchange, including age, policy and fault-related exchanges, would continue to be reflected in general transportation charges.

In the longer term, to further facilitate competition in meter work, Transco is considering whether it would be appropriate to develop a menu of metering charges to enable customers to choose, and pay for, only those services that they require from Transco.

QUESTIONS FOR CONSULTATION

Respondents are invited to comment on whether:

Rebates in respect of domestic metering services provided by an organisation other than Transco should remain at £10 per annum

It would be appropriate to increase the PPM charge to a more cost reflective level of £30, and

A separate charge should be introduced to reflect the costs of customer-requested meter exchanges.

Appendix 1 - Prepayment Meter Methodology

Meter Provision Costs

Meter provision costs include depreciation, an allowance for a return on assets and an element reflecting the costs of exchanging the meter for a replacement at the end of its useful life.

The depreciation charge and level of return reflected in the charge are sensitive to assumptions regarding meter purchase price and asset life. Consistent with a forward looking methodology, the proposed charge reflects the latest meter contract prices and Transco's best estimate of asset lives.

Electronic Token Meters (on which the calculation of Prepayment Meter costs is based) have an electronic prepayment mechanism that reduces the useful life to ten years or less. Therefore, to better reflect forward looking costs, the proposed charge assumes a ten year asset life. Whilst Transco presently depreciates all meters over twenty years, this policy is under review. Transco expects that the results of this review will be available by the end of May 1999 and intends to take account of any recommendations in its final proposals.

Appendix 2 shows how Transco has calculated prepayment meter provision costs.

Meter Installation Costs

Direct installation costs include labour and materials costs. Transco capitalises these costs and the resulting capital value is added to the regulatory asset base and is depreciated over the life of the meter. Support and sustaining costs are also reflected in the charge (but they are not capitalised).

Appendix 3 shows how Transco has calculated prepayment meter installation costs.

Meter Maintenance Costs

Finally, the proposed charge reflects planned and unplanned maintenance costs. For the purpose of calculating forward looking planned maintenance costs, Transco has assumed that battery changes are carried out during visits made for other purposes. Battery change costs therefore reflect materials costs and the time taken to change the battery, but not travel time.

Unplanned maintenance costs reflect average labour and materials costs, including support and sustaining costs, multiplied by the expected frequency of maintenance visits per meter. To calculate forward looking costs, Transco has excluded costs associated with some existing maintenance activities, including costs associated with the tilt/tamper mechanism.

Appendix 4 shows how Transco has calculated prepayment meter maintenance costs.

Appendix 2 - Prepayment Meter Provision Costs

A2.1 Capital Cost

$$\text{Annual cost} = \frac{\text{Meter asset cost}}{1 - \frac{1}{(1+ir)^t} \times \frac{1}{ir} \times \sqrt{(1+ir)}}$$

where ir = interest rate (7%), and
 t = asset life (10 years)

$$\begin{aligned} \text{Annual cost} &= \frac{\pounds 152.72}{1 - \frac{1}{1.07^{10}} \times \frac{1}{0.07} \times \sqrt{1.07}} \\ &= \frac{\pounds 152.72}{7.27} \\ &= \pounds 21.02 \end{aligned}$$

A2.2 Age-related Exchange

$$\begin{aligned} \text{Annual cost} &= \frac{\text{Labour time} \times \text{hourly labour rate} \text{ (1)}}{t} \\ &= \frac{0.83 \times \pounds 44.50}{10} \\ &= \pounds 3.69 \end{aligned}$$

A2.3 Total cost

Annual Cost =	Capital Cost	£21.02
	Exchange	£3.69
	Total	£24.71

(1) Including support and sustaining costs at 212%, consistent with the methodology described in Transco's background note *Charging for Specific Services - Cost Assignment Methodology*.

Appendix 3 - Prepayment Meter Installation Costs

A3.1 Capital Cost

$$\begin{aligned}
 \text{Annual cost} &= \frac{\text{materials cost} + (\text{labour time} \times \text{direct labour rate})}{1 - \frac{1}{1.07^{10}} \times \frac{1}{0.07} \times \sqrt{1.07}} \\
 &= \frac{\pounds 8.05 + (1.17 \times \pounds 19.38)}{7.27} \\
 &= \pounds 4.23
 \end{aligned}$$

A3.2 Support & Sustaining Cost

$$\begin{aligned}
 \text{Annual cost} &= \frac{\text{labour time} \times \text{direct labour rate} \times \text{support \& sustaining percent (1)}}{\text{asset life}} \\
 &= \frac{1.17 \times \pounds 19.38 \times 130\%}{10} \\
 &= \pounds 2.94
 \end{aligned}$$

A3.3 Total Cost

Annual cost =	Capital cost	£4.23
	Support & sustaining costs	£2.94
	Total	£7.17

(1) Reflects those support costs that are not capitalised.

Appendix 4 - Prepayment Meter Maintenance Costs

A4.1 Planned Maintenance Costs

$$\text{Annual cost per battery} = \frac{\text{Battery cost} + (\text{labour time} \times \text{hourly labour rate})}{\text{Asset life}} \quad (1)$$

$$= \frac{\pounds 4.85 + (0.25 \times \pounds 44.50)}{10} = \pounds 1.60$$

$$\text{Number of batteries} = \frac{\text{Asset life} - 1}{\text{Battery life}} = \frac{10-1}{2.5}$$

$$= 3 \text{ (rounded down to the nearest whole number)}$$

$$\text{Annual cost} = \pounds 1.60 \times 3 \text{ batteries}$$

$$= \pounds 4.79$$

A4.2 Unplanned Maintenance Costs

$$\text{Annual cost per visit} = \frac{\text{Materials cost} + (\text{labour time} \times \text{hourly labour rate})}{\text{Asset life}} \quad (1)$$

$$= \frac{\pounds 0.50 + (0.69 \times \pounds 44.50)}{10}$$

$$= \pounds 3.12$$

$$\text{Annual cost} = \pounds 3.12 \times 2.1 \text{ visits per meter} \quad (2)$$

$$= \pounds 6.55$$

A4.3 Total Cost

Annual charge =	Planned maintenance	£4.79
	Unplanned maintenance	£6.55
	Total	£11.34

(1) Including support and sustaining costs at 212%, consistent with the methodology described in Transco's background note *Charging for Specific Services - Cost Assignment Methodology*.

(2) Reflects a forward looking estimate of maintenance visits, excluding some existing maintenance visits, such as those associated with the tilt/tamper mechanism.

Appendix 5 - One-off Charges for Customer-requested Exchanges

Consistent with the methodology used to determine existing one-off charges, it is proposed that one-off charges for customer-requested meter exchanges reflect average labour, travel and materials costs, including support and sustaining costs.

A5.1 Customer-requested Exchanges of Domestic Meters

Charge = materials cost + (weighted average labour time x hourly labour rate) (1)

$$= \text{£}1.00 + (1.05 \times \text{£}44.50)$$

$$= \text{£}47.83 \text{ per meter exchange}$$

(1) Including support and sustaining costs at 212%, consistent with the methodology described in Transco's background note *Charging for Specific Services - Cost Assignment Methodology*.

A5.2 Customer-requested Exchanges of Industrial & Commercial Meters

For consistency with other one-off charges, it is proposed that customer-requested exchanges of Industrial and Commercial meters are charged on an individual basis, consistent with the methodology described above for domestic meters.