

APPENDIX 5.3V  
*(referred to in paragraphs 2.198 and 5.36)*

*(This does not form part of the Cellnet report)*

## **Models of Vodafone's costs**

### **Introduction**

1. This appendix describes Vodafone's model<sup>1</sup> of its costs and OFTEL's model applied to Vodafone's costs and traffic. As Cellnet's model used network-specific routing factors, we were unable to apply it to Vodafone's costs.

### **The Vodafone model**

2. Vodafone's model allocated all costs to incoming calls, outgoing calls and PRS. It used seven allocation mechanisms. Five of these were the same as those we used in our model (see paragraph 5.75). In addition, it allocated its voicemail service costs to incoming and outgoing calls on the basis of divert and retrieve minutes respectively, and it allocated marketing costs and service provider incentives to incoming and outgoing calls on the basis of 'prime margin' (that is, revenues less variable costs). Table 1 summarizes Vodafone's model using its cost and traffic data for 1997/98, and its assumed cost of capital of 17.75 per cent. The allocation of costs to incoming calls was £264 million, corresponding to a cost of 14.4 ppm.

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<sup>1</sup>Vodafone said that it had not constructed a model but had developed a set of calculations in response to requests from the DGT. We refer to it as a model for convenience. Vodafone also said that, in its view, this did not represent the best way to model its costs.

TABLE 1 Vodafone's allocation of its costs, 1997/98

	Costs allocated to							
	Total costs		Incoming calls		Outgoing calls		PRS	
	£m	%	£m	%	£m	%	£m	%
<i>Call minutes allocation</i>								
General depreciation*								
Engineering*								
Administration*								
<i>Divert/retrieve calls allocation</i>								
Voicemail*								
<i>Minutes excluding PRS allocation</i>								
Other leased lines*								
Radio depreciation*								
Cell site running*								
Frequency licence*								
Operations*								
Cell sites return†								
Other assets return†								
<i>Outgoing calls allocation</i>								
POLOs								
Customer care*								
Billing*								
<i>Prime margin allocation</i>								
Marketing								
Incentives								
<i>Processor allocation</i>								
MSC/BSC depreciation*								
MSC/BSC running*								
MSC/BSC return*								
<i>Transit allocation</i>								
Transit lines*								
Transit depreciation*								
Transit running*								
Transit switches return†								
Total	887	100	264	30	617	69	6	1
Cost per minute (p)			14.4		19.6		7.7	

Figures omitted.  
See note  
on page iv.

Source: Vodafone.

\*These are network costs or overheads.

†Calculated by applying a cost of capital of 17.75 per cent to the appropriate assets.

Note: Figures may not add to 100 per cent because of rounding.

## OFTEL's model

3. OFTEL's model of Vodafone's costs allocated costs to four services: incoming calls, outgoing calls, PRS and access. Its categorization of costs was the same as Vodafone's. It allocated costs to access on the basis of the cost required to provide a 'minimum geographic network'. The amount allocated to access had been calculated on a year-by-year basis by the DGT. Given that no such negotiations took place in 1997/98, as the determination process was not invoked, we had to estimate the figure for access in the 1997/98 model. We used the same proportion of access costs for each cost item as was used for 1996/97.

4. For network costs, once costs had been allocated to access, the balance was allocated to incoming calls, outgoing calls and PRS in fixed proportions (36:63:1 for costs allocated on call minutes; 37:63 for costs allocated on call minutes excluding PRS; and 55:44:1 for costs allocated on processor time).

5. OFTEL did not allocate costs for marketing to incoming calls. However, once it had determined incoming call costs per minute, it added back an adjustment for marketing, based on a call minute apportionment. In order to simplify the model and allow the logic to be carried forward into 1997/98 without affecting the results, we revised the model to allocate marketing costs on the basis of call minutes.

6. The application of OFTEL's model, subject to our revisions noted above, to Vodafone's cost and traffic data for 1997/98 (assuming a cost of capital of 17.75) is set out in Table 2. This shows that total costs allocated to incoming calls were £195 million, corresponding to a cost of 10.6 ppm.

TABLE 2 OFTEL's allocation of Vodafone's costs, 1997/98

	Costs allocated to									
	Total costs		Access		Incoming calls		Outgoing calls		PRS	
	£m	% of total	£m	% allocated	£m	% allocated	£m	% allocated	£m	% allocated
<i>Access allocation</i>										
Voicemail*					Figures omitted. See note on page iv.					
Customer care*										
Billing*										
Incentives										
Total	237	27	237	100	0	0	0	0	0	0
<i>Outgoing allocation</i>										
POLOs*	144	16	0	0	0	0	144	100	0	0
<i>Call minutes allocation</i>										
Transit lines*					Figures omitted. See note on page iv.					
General depreciation*										
Engineering*										
Marketing										
Administration*										
Operations*										
Total	159	25	6	4	55	35	95	60	2	1
<i>Minutes excluding PRS</i>										
Transit depreciation*					Figures omitted. See note on page iv.					
Radio depreciation*										
Other leased lines*										
Transit running*										
Cell site running*										
Frequency licence*										
Transit switches return†										
Cell sites return†										
Other assets return†										
Total	236	20	16	6	82	35	138	59	0	0
<i>Processor time</i>										
MSC/BSC depreciation*					Figures omitted. See note on page iv.					
MSC/BSC running*										
MSC/BSC return†										
Total	111	13	4	3	58	52	48	43	1	0
<b>Total</b>	<b>887</b>	<b>100</b>	<b>264</b>	<b>30</b>	<b>195</b>	<b>22</b>	<b>425</b>	<b>48</b>	<b>3</b>	<b>0</b>
Cost per minute (p)					10.6		13.5		4.8	

Source: MMC.

\*These are network costs and overheads.

†Calculated by applying a cost of capital of 17.75 per cent to the appropriate assets.