



# LLCC PPC Points of Handover pricing review

Revisions to proposed modifications of SMP  
Conditions

Second Consultation

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## Section 1

# Executive Summary

- 1.1 This consultation is a follow up to our LLCC PPC Point of Handover Pricing Review consultation published on 26 January 2011 (“the January Consultation”).<sup>1</sup> The January Consultation reconsidered a number of issues remitted back to Ofcom by the Competition Appeal Tribunal (“CAT”) following the disposal of the Leased Lines Charge Control appeal (“the LLCC Appeal”) on 20 September 2010.<sup>2</sup> The remitted issues relate specifically to the cost recovery approach for Points of Handover (“POHs”) used to deliver Partial Private Circuits (“PPCs”).
- 1.2 In the January Consultation, we said we were considering additional POH charges – those charges that recover costs incurred in providing POH services but which are not recovered through the POH connection and rental charges. We said we were considering these charges for both Type I POHs (those POHs purchased by CPs on wholesale terms) and Type II POHs (those POHs initially purchased on retail terms and subsequently re-designated as wholesale). We made a number of proposals relating to the cost-recovery approach and the cost estimates for the additional POH charges. In particular:
- we proposed that the additional POH charges should be brought into line with Long Run Incremental Cost (“LRIC”) and we proposed to set the charges based on LRIC estimates derived from our own bottom up model;
  - based on our bottom-up model we estimated that the costs of providing additional POH costs were between £3.5m and £4.1m on a LRIC basis, with a central estimate of £3.8m; and
  - we proposed that Type I POH charges should be reduced immediately to LRIC, while increases in Type II charges should be phased.
- 1.3 We asked for stakeholders comments on our proposed approach and cost estimates and we received six consultation responses. These responses raised a number of issues about our overall approach and also about the specific assumptions used in our bottom-up model.
- 1.4 In this consultation we address the comments related to our modelling assumptions. We propose a number of updated modelling assumptions.<sup>3</sup> In addition, we propose that price changes for Type II POHs should be made in a single change and not phased, as we proposed in the January Consultation.
- 1.5 This consultation sets out what changes we have made to our cost estimates in our bottom up model and how this affects our overall proposed new additional POH charges. We now estimate that the additional POH costs are in the range of £2.7m to £3.4m on the proposed LRIC basis. We propose that, if our final decision is to adopt a bottom-up LRIC approach based on our model (amended by the updated

<sup>1</sup> <http://stakeholders.ofcom.org.uk/consultations/points-handover-pricing/>

<sup>2</sup> [http://www.catribunal.org.uk/files/1112\\_Cable\\_Wireless\\_Ruling\\_200910.pdf](http://www.catribunal.org.uk/files/1112_Cable_Wireless_Ruling_200910.pdf)

<sup>3</sup> We have also today published a revised version of our bottom-up model: <http://stakeholders.ofcom.org.uk/binaries/consultations/revision-points-handover-pricing/annexes/model.xls>

assumptions proposed in this consultation), the additional POH charges that should apply from 1 October 2011 to 30 September 2012 are:

**Table 1: Ofcom’s proposed new additional POH charges**

Type I POHs (£ per POH)	SMA-1	SMA-4	SMA-16	Bearer
Proposed charges				
- Lower estimate	£382	£453	£1280	£221
- Base case estimate	£402	£477	£1350	£232
- Upper estimate	£422	£501	£1415	£244
Type II POHs (£ per circuit)	Sub 2M	2M	34M	155M
Proposed charges				
- Lower estimate	£114	£193	£997	£1818
- Base case estimate	£120	£203	£1029	£1914
- Upper estimate	£138	£234	£1183	£2201

1.6 The key changes we have made are as follows:

- **Capital cost of fibre:** We have updated the costs of fibre cables, using a 24 or 48 fibre cable instead of blown fibre, and have removed the cost of blown-fibre sub-duct from our calculation. We have also increased the distances related to the provision of POHs:
  - for In Span Handover (“ISH”) we have increased the distance to 50 metres;
  - for ISH extended we have increased the distance to 1503 metres; and
  - for Customer Sited Handover (“CSH”) we have increased the distance to 1503 metres of spine fibre<sup>4</sup> plus 622 metres of access fibre.
- **Accommodation related costs:** We have removed the rack costs included in our previous model as these were one-off installation costs. We have added a licence fee charge which covers the cost of accommodation rental. We have also included an annual cost for provision of air conditioning in place of the charges used in the original model which represented one-off charges.
- **Network management:** We have reduced network management from 23% to 17% of operational costs. We have added in network management charges for Type I POHs which were originally excluded.
- **Failure rates:** We have updated the failure rates for PDH<sup>5</sup> equipment and for bearers, based on additional data provided by BT. We have reduced the failure rates of 4x2 and 16x2 PDH equipment from 20 years and 50 years respectively to 12.8 years. We have increased the assumed number of faults per 100km of fibre from 1 per year to 8 per year and have calculated separate rates for failure of access fibre compared to shared fibre used in the delivery of POHs.

<sup>4</sup> Spine fibre refers to fibre used in the backhaul and core of BT’s network. Multi-fibre cables are used and many cables share each duct.

<sup>5</sup> POHs can be provided using either Plesiochronous Digital Hierarchy (“PDH”) or Synchronous Digital Hierarchy (“SDH”) technology.

- **Engineering rates:** We have made a small amendment to the engineering rate we have used.
  - **Support costs:** We have reduced our estimate of the costs of support to one Full Time Equivalents (“FTEs”), as opposed to three FTEs.
  - We have adjusted the **Weighted Average Cost of Capital** (“WACC”) to reflect a real-terms WACC rather than a nominal WACC.
  - We have adjusted the proposed charges to take account of **inflation**.
- 1.7 Section 2 of this document sets out our proposed amendments to the modelling and cost estimates detailed in the January Consultation and Annex 6 includes an amended notification of the proposed modification to the price controls on BT in respect of these charges.
- 1.8 We are also proposing to change our approach to the timing of price changes to the Type II additional POH charges. We consider that phasing the price increases to Type II POH charges is not necessary now, because we are proposing that these charges are no longer subject to such significant increases.
- 1.9 As this consultation is only seeking stakeholder comments on the specific revisions to our bottom-up modelling and the timetable for their implementation, we consider that a period of four weeks is appropriate for stakeholders to submit their comments. We are therefore seeking responses to this consultation by **20 July 2011**.
- 1.10 We intend to publish a statement in the autumn, which will confirm our final decision on the approach to assessing POH charges and the level at which charges should be set. In the statement we will address all outstanding stakeholder comments in response to the January Consultation as well as setting out our decision on costs and charges based on both consultations.

## Section 2

# Proposed changes to POH modelling and cost estimates

## Introduction

- 2.1 In this Section, we first summarise the main points of our January Consultation, in particular we have set out our specific approach to estimating the costs related to the additional charges for POHs and we have then discussed stakeholders' comments on these cost estimates. We then present our revised proposals for the POH charges and why we consider that these are consistent with our duties and meet the relevant legal tests.
- 2.2 In this consultation, we are specifically seeking views on the updated cost modelling assumptions used within the Ofcom bottom up LRIC model, based on the responses to the January Consultation. We think it is important to do this to provide stakeholders with an opportunity to comment on these updated assumptions before we finalise our proposals.
- 2.3 BT argued strongly in its response against the phased approach to Type II price increases. The updated assumptions we are consulting on in this document reduce the proposed level of charges for Type II POHs. In the light of this, we are also consulting on an updated proposal that removes the phasing approach and proposes charges that will apply from 1 October 2011 to 30 September 2012.
- 2.4 We are not proposing to change our previous proposals in relation to other issues - such as the use of LRIC pricing as opposed to the other options discussed in our January Consultation. Therefore we are not consulting on these issues again. We will address stakeholder comments made in relation to these issues in response to both consultations when we finalise our decision in our statement. This document therefore only highlights comments from stakeholders which relate to the changes we have made to our modelling and cost estimates.

## The January Consultation

- 2.5 In our January Consultation, we assessed a number of options for setting charges to recover POH costs not recovered through the POH connection and rental charges. These charges are referred to as 'additional POH charges'. We also discussed BT's estimates of the costs that should be recovered through these charges. We proposed that in future additional POH charges should be based on LRIC estimates derived from our own bottom-up model,<sup>6</sup> which we considered to be more robust than the LRIC estimates provided by BT.
- 2.6 In developing our bottom-up model, we relied on BT's published charges for some items and in order to convert these published charges to LRIC, we applied a suitable LRIC/Price ratio. In the January Consultation, we considered two different options for this ratio:

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<sup>6</sup> Available here: <http://stakeholders.ofcom.org.uk/consultations/points-handover-pricing/>

- Option 1: Use a LRIC/Price ratio based on BT's view of the LRIC for the additional POH costs.
- Option 2: Use a LRIC/Price ratio which is more consistent with the published charges used as inputs in the Ofcom model.

2.7 We proposed to implement Option 2. We noted that the inputs we were using in this way were not themselves POH or PPC services but were in fact related to the Openreach LLU co-mingling services. We considered that by calculating LRIC/Price ratios for the LLU co-mingling services we would obtain better estimates of the LRIC of relevant inputs to our model. We looked at the different services reported in the LLU co-mingling market and considered that MPF<sup>7</sup> Hostel Rental and Tie Cables were the most appropriate proxy services for the costs we were trying to estimate. We noted that the revenue-weighted average LRIC/Price ratio for those two services was 69.6% and we therefore proposed to round that figure up and use a LRIC/Price ratio of 70%.<sup>8</sup>

2.8 We identified three major cost categories associated with the provision of a POH and discussed in detail how we had estimated each of these costs:

- Category 1 - Capital: the capital costs of duct, fibre and equipment spares;
- Category 2 - Operational: accommodation, power, air conditioning, maintenance, network management, monitoring and security; and
- Category 3 - Support: marketing and sales, design, installation, commissioning and customer support.

2.9 Based on our bottom-up model, we estimated that additional POH costs were between £3.5m and £4.1m on a LRIC basis, with a central estimate of £3.8m.<sup>9</sup> Based on this model we proposed that BT's charges for additional POH services should be as shown in Table 2 below.

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<sup>7</sup> "Metallic Path Facility"

<sup>8</sup> See paragraphs 4.24 to 4.29 of the January Consultation, we also provided more detailed explanation of our calculations in Annex 6, paragraphs A6.7 to A6.14. See BT's Regulatory Financial Statements in 2009/10 (p.55).

<sup>9</sup> Based on latest POH volumes as of September 2010.



**Table 2: Ofcom’s proposed new additional POH charges in the January Consultation**

<b>Type I POHs (£ per POH)</b>	<b>SMA-1</b>	<b>SMA-4</b>	<b>SMA-16</b>	<b>Bearer</b>
BT current charges	£3,435.27	£5,108.81	£8,151.42	£338.07
Proposed charges (Summer 2011)				
- Lower estimate	£616	£716	£2,028	£381
- Central estimate	£648	£753	£2,135	£401
- Upper estimate	£680	£791	£2,242	£421
<b>Type II POHs (£ per circuit)</b>	<b>Sub 2M</b>	<b>2M</b>	<b>34M</b>	<b>155M</b>
BT current charges	£103.31	£175.63	£888.47	£1,652.96
Proposed charges (Phase I-Summer 2011)				
- Lower estimate	£119	£202	£1,020	£1,898
- Central estimate	£125	£212	£1,074	£1,998
- Upper estimate	£131	£223	£1,128	£2,098
Proposed charges (Phase II-April 2012)				
- Lower estimate	£139	£236	£1,196	£2,226
- Central estimate	£146	£249	£1,259	£2,343
- Upper estimate	£154	£261	£1,322	£2,460

- 2.10 Based on these proposed new charges we also considered that Type I POH charges should be reduced immediately to LRIC, while Type II charges should be aligned with LRIC in two stages, with half the adjustment occurring upon publication of our statement (or very shortly thereafter), and the other half occurring on 1<sup>st</sup> April 2012.
- 2.11 Section 4 of the January Consultation set out our approach to estimating the level of the additional POH costs which BT should recover via the additional POH charges and Annex 6 detailed our approach to modelling these costs.

### **Stakeholder responses to the January Consultation**

- 2.12 We received comments from BT, C&W, Verizon, Global Crossing and Virgin Media. These included comments on our proposed general approach to charges, our proposed estimates and modelling assumptions and our approach to phasing in increases to Type II charges. In relation to our proposed cost estimates and modelling, BT made a number of comments which suggested that the costs should be higher whilst the other CPs all argued that the costs should be lower.
- 2.13 We address below the comments in relation to the three categories of cost highlighted above. For each cost category we first provide a summary of what we said in the January consultation, then outline stakeholder comments, as well as discussing any additional information provided by BT in response to those comments, before finally outlining our proposed revisions to the cost estimates. We also address general comments where they impact on our cost modelling.

## Capital costs

### Bearer, duct and fibre costs

#### Approach in the January Consultation

2.14 We discussed our approach to calculating capital costs in paragraphs 4.35 to 4.36 and, in particular for duct and fibre costs, in paragraph A6.19 to A6.20 of the January Consultation. We used Openreach prices for footway duct, sub-duct and fibre (adjusted by our proposed LRIC/Price ratio of 70%) and used an average distance of 980m between the BT and CP nodes (based on information received from BT). We also assumed there were 240 fibres per duct. This information provided the total up-front costs of duct and fibre used in the provision of POH and we then converted this into an annual rental charge.

#### Stakeholder comments

##### *Duct and fibre*

- 2.15 C&W argued that for the annual rental charge for duct and fibre we should reconsider the relevant line item used in the Openreach excess construction charges. C&W agreed with Ofcom's use of the 'New Ductwork – Footway' charge for duct, at £80. It argued that this was the correct selection for POH rental input because POH was more likely to be in an urban location. However, it said that our approach added in an element to cover the cost of cabling to the ductwork costs and that this was unnecessary. It also noted that ducts could carry 240 fibres and it agreed with Ofcom's approach of apportioning part of the duct costs to each fibre (i.e. dividing the cost by 240).
- 2.16 C&W recommended the charge used for cable should be the £7.50 cable charge from Openreach's price list (as opposed to the £4 for four fibres which was used in the Ofcom model) because in providing a POH a 24 fibre cable would be provided into a CP's point of presence. It stated that the appropriate number of fibres would be used for the PPC Handover and other fibres would be used for other handover equipment relevant to other services handed over at the same point of presence. It noted that an additional line was required in the model to account for the 24 fibre cable. It proposed that the model then needed to reflect how the different types of handover used fibres, for example an ISH extension used four fibres but a CSH (via single fibre working and a protection fibre), 4x2 and 16x2 all used two fibres.
- 2.17 Global Crossing also argued that the most efficient way to deploy fibre infrastructure between BT's fibre node and the customer premises would be to use a much higher count cable than had been suggested. It proposed that Ofcom should base its modelling on a 24-fibre count cable.
- 2.18 BT subsequently submitted further information which showed that the latest CCA<sup>10</sup> fibre valuation could be used to estimate the cost per metre of a 48 fibre cable and a four fibre blown cable. BT also indicated that whilst SDH POHs were likely to have been provided using a 48 fibre cable, PDH deployment was likely to have used 24 fibre cable.
- 2.19 BT submitted further information to support its view that the number of fibres per duct appeared too high at 240. It said that the average number of fibres per duct could be

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<sup>10</sup> Current Cost Accounting.

derived by dividing the proportion of duct allocation to fibre by the volume of fibre kilometres carried by the duct. This gave a figure of 164 fibres per duct. It noted that figure made no allowance for sterilised fibre and spare capacity which would reduce the revenue earning fibres per duct, suggesting a figure lower than 164 fibres per duct might be appropriate.

- 2.20 BT also noted there did not appear to be any costs included within Ofcom's model for the in-building tie cables. It argued that these tie cables could be up to 100m long depending on the size of the building and the location of the equipment room relative to the cable chamber.
- 2.21 In addition, BT submitted further evidence in relation to CSH POHs. It said that CSHs comprised both spine fibre and blown fibre for the final drop into the CP's site, but that the cost of this final drop should not be included in the additional charges (though maintenance of this fibre drop should). BT's data demonstrated that the radial distance between the BT exchange and the customer location for CSH POHs was comprised of spine fibre covering an average of 1.5km and blown fibre of 622m. Thus, the model should include the costs of 1.5km of spine fibre but no blown fibre. This compares to the original Ofcom model that included 980m of blown fibre.
- 2.22 BT also noted that the ISH handover had to be at a footway box within 100m of the BT exchange. It considered that a reasonable estimate of the duct between the ISH footway box and the BT exchange was therefore around 50m, compared to Ofcom's estimate of 10m.

### Ofcom's response

- 2.23 In response to C&W's point about the additional element for cabling added to duct, in the January Consultation, we added the cost of a sub-duct to support blown fibre. This costs £3.50, giving a total of £83.50 per metre. The LRIC/Price ratio was then applied to this figure. As we have updated our model and are now considering spine fibre, noting BT's additional response above, we think it is correct to remove this charge. However, we note that whether or not we include the blown fibre tube figure, does not have a material impact on the overall costs or charges.
- 2.24 In relation to the comments on the relevant charge for fibre, we agree with BT that costs of spine fibre used for SDH POHs should be based on a 48 fibre cable, that spine fibre for PDH POHs should be based on a 24 fibre cable and that the final drop blown fibre is already recovered through other charges and so should be excluded. There is no direct comparison charge for spine fibre on the Openreach price list and so we have estimated the costs of 48 fibre and 24 fibre spine cable. C&W suggested we should use the £7.50 per metre charge from the Openreach price list and that a 24 fibre cable would be used. This would indicate a charge of around 20p per fibre per metre after the LRIC/Price ratio has been applied. However, a 48 fibre cable may have a lower cost per fibre than a 24 fibre cable. Therefore, we have assumed a cost of 15p per fibre per metre in our modelling estimates. A charge around this level would be broadly consistent with data formally provided by BT on its valuation of fibre. This reduces the price below that suggested by both C&W and Global Crossing.
- 2.25 We agree that the model should reflect the actual number of fibres used by a POH and have updated it to reflect this.
- 2.26 We have taken account of BT's data on average duct fibre. We accept that whilst each duct is capable of carrying up to 240 fibres, this maximum fill will not always be

achieved. BT's data indicates a figure of 164 fibres per duct should be used. We believe this is a reasonable assumption and, in addition, we have allowed for 10% of fibres being unused/sterilised, giving a figure of 148 fibres per duct.

- 2.27 We accept that some costs will be incurred by in-building tie cable runs. BT suggested that an in-building cable run could be up to 100m depending on the building. We have looked at the most appropriate proxy for this in the Openreach price list. However, tie cables provided by Openreach tend to be 100 copper pair cables. We note that the annual rental of these cables, for a 100m run, is £121.08. We would expect the price of tie cables for support of fibre products would cost considerably less than this. We have therefore used the Cablelink product as a proxy for the cost of a tie cable, as this product provides connectivity within BT's exchanges. The relevant annual rental for Cablelink is £24 per annum.
- 2.28 We also agree with BT that the location of the ISH footway box may be further away from the BT building than the 10m assumed in our original estimates. BT suggests that as 100m is the maximum length of an ISH connection, we should assume an average length of 50m. We note that the effect on the model of varying the length of this connection is minimal<sup>11</sup> and therefore we propose to use the 50m figure suggested by BT.
- 2.29 Finally, we have updated our model to include the updated fibre lengths provided by BT.

*Q1: Do you agree with our revised proposals for the capital costs, in particular the annual rental charges for duct and fibre? If not, please explain why and provide alternative data.*

## Operational costs

### Accommodation related costs

#### Approach in the January Consultation

- 2.30 We set out our proposed approach to operational costs in paragraphs 4.37 to 4.42 of the January Consultation. We also specifically addressed accommodation related costs in paragraphs A6.21 to A6.23. We used Openreach's published prices for LLU Plan and Build (adjusted by our proposed LRIC/Price ratio of 70% where appropriate). We noted that we had used the average of the seven different rack charges and eight different DC power options published in Openreach's published price list.

#### Stakeholder comments

- 2.31 BT stated that the rack footprint factor of 3.85 (which was used to derive the total operational space required by the POH equipment) did not include any allowance for fixed common costs, such as space for cable-runs, space between the racks to allow for access, common space areas such as entrances corridors between rooms, welfare facilities and security and services. It therefore argued that the accommodation costs should be treated as incremental and that the 70% ratio should not be applied.

<sup>11</sup> Changing the assumed length from 10m to 50m increases the total cost estimate by 0.1%.

- 2.32 BT made several points in relation to power. It stated that it provided back-up power to generate its own power within the exchanges should there be a supply failure from the National Grid. The Ofcom model used an Openreach price that excluded back-up power and so the power rental cost of £13.20 per kW should be replaced with a cost of £162 per kW.<sup>12</sup> There are fixed common costs associated with the provision of this back-up power capability, and so BT said it would be appropriate to apply a LRIC/Price ratio to this cost. It also said that, in addition, the cost of an AC Power Supply rental (shown on the Openreach price list as £348 per 10kW) was also required to deliver a power supply from the mains supply to the operational room. It stated that this cost was proportional to the power rating and therefore should be considered to be incremental, meaning that the LRIC/Price ratio should not be applied.<sup>13</sup>
- 2.33 Finally, BT suggested that we had inappropriately applied a LRIC/Price ratio to a number of other accommodation related operational costs, including:
- **Air conditioning:** BT argued that this charge was payable based on the energy consumption; i.e. the charge was purely covering the cost of the power used. On this basis there was no justification for the use of a LRIC factor; and
  - **DC power:** BT argued that those costs related to the cost of batteries required and this was clearly an incremental cost.
- 2.34 C&W considered that the approach to obtaining a rack charge needed to be amended to derive a proxy for a charge that BT could reasonably be expected to incur. It recommended that Ofcom should look again at the charges, and, assuming that BT would make the most efficient decision when designing and building its network, it would be the lowest (per unit) of the various rack charges that would apply. It noted that Ofcom’s model shows the most efficient option on a LRIC basis was a rack space unit that could hold six units at a per unit price of £601.53. It considered that it was this unit price that Ofcom should use in the revised model. Similarly C&W argued that the appropriate price for power was to use the lowest published price of 6p.
- 2.35 Verizon was concerned about the use of the Openreach price list as a proxy for the space and accommodation costs incurred in providing the PPC POHs. It noted that its understanding was that BT Wholesale did not procure accommodation on an EOI<sup>14</sup> basis from Openreach and instead it had direct access to it through other arrangements (possibly from BT Operate). Therefore it considered that the Openreach price list included Openreach costs which are not relevant to the services in question and therefore the true costs might well be substantially lower. It noted that the application of the LRIC factor might abate some of these costs but it believed that analysis had not been done to assess whether the LRIC factor would also remove

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<sup>12</sup> BT highlighted the entry for back-up power in Openreach’s LLU price list, in section 2.1.2 on ‘power’ under the heading “Provision of Standby Epower (ESS)(Note 1).” The product name is “Rental of existing capacity per kW per annum (Note 2, charges will appear in billed units of decawatts (10W)” at <http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=5aGuTJ%2Bu7bjhXjKH3sW9KvqgAFdbfkJjvFiM9%2FNj42QIMnGHsqdC0vzO163bJmh34D91D7M0q8u%2F%0AIIsgtIFAKw%3D%3D>

<sup>13</sup> BT referenced the Openreach LLU price list, sections 2.1.1 “Accommodation AC Final Distribution Rental per 10kw increment per annum”.

<sup>14</sup> “Equivalence of Inputs” means that Openreach provides, in respect of a particular product or service, the same product or service to all Communications Providers (including BT) on the same timescales, terms and conditions (including price and service levels) by means of the same systems and processes.

costs included in the Openreach LLU products but which were not used in the POH product. Verizon also questioned whether Ofcom had chosen the most efficient option from the Openreach products.

### Additional information from BT

- 2.36 Subsequent to the January Consultation, and in response to comments from other CPs, we formally asked BT to provide additional information on accommodation related costs. On the use of DC power, BT said that the cost of this option was directly proportional to the number of back-up batteries an operator requested to rent. On that basis there were no fixed and common costs and therefore those costs should be included without applying a LRIC ratio. It also noted that operators had the option to self-supply DC power and therefore competitive pressures meant the price reflected the fact that there was no obligation to buy that equipment from BT and there were good grounds not to apply the LRIC ratio to the DC power option price.
- 2.37 On air conditioning, BT noted that the extent to which their exchanges required air conditioning depended on the energy density within the exchanges. Where the energy density was relatively high, air conditioning units were used to provide the necessary chilling. BT noted it required that the total air conditioning load was divided into a number of units so that there was the capability to provide the necessary chilling should a unit require maintenance or break down. This meant that, when compared with the power output of BT's POH equipment of 355kW in total, the POH equipment drove the requirement for a significant number of air conditioning units to provide the necessary chilling.
- 2.38 BT argued that there was no specific allowance for the cost of the air conditioning equipment within the POH connection charges, because an additional single POH mux would not normally require augmentation of the cooling plant. It considered, however, that taking the incremental POH costs in aggregate, there was a long run demand on the cooling within BT exchanges resulting from the heat output from this equipment. It therefore argued that it was necessary to include an annualised cost to take account of the incremental cooling consequential to the POH equipment. It argued that a reasonable estimate would be to take one third (33%) of the installation charge in the Openreach price list to represent the cost of capital, depreciation and operating costs incurred in providing the cooling service.

### Ofcom's response

- 2.39 We continue to think that the 3.85 multiplication factor is appropriate. We used a rack footprint of 600mm wide by 300mm deep in the model, whereas the actual equipment is narrower, therefore leaving space on either side for cables. We would also stress that the 3.85 factor is the minimum footprint allowed, since we allow either the 3.85 factor, or the minimum area required to allow for sufficient heat dissipation, whichever is greater. This footprint factor therefore includes an allowance for space between racks and for cabling within the rack. As cable runs would be under-floor or suspended from ceilings we would not expect any further allowance would be needed for these. We are also of the opinion that this factor includes sufficient space to account for any incremental security and common services and areas. Finally, we consider that our approach treats these costs correctly because the total area to house POH equipment is calculated based on the amount of equipment and therefore the number of racks needed and is not multiplied by the LRIC/Price factor. This is consistent with the point BT makes that this factor should not be applied to the actual space needed.

- 2.40 We agree with BT that a charge for back-up power should be included. The POH equipment is likely to run off the exchange supply which benefits from the back-up power facilities provided in the event of a failure of power from the National Grid. We have used the Openreach price for back-up power, and applied the LRIC/Price ratio to it. We also agree with BT that a charge for AC power rental should be included and have used the Openreach figure of £385 per 10kWh. These two changes, taken together in the absence of the other proposed changes, increase overall POH charges, compared to those proposed in the January Consultation by a small amount (1.6% in total with the SMA-16 price changing the most, by just over 6%).
- 2.41 We agree with BT that the power usage charge is a pass-through of the costs faced by Openreach and as such it is incorrect to apply the 70% LRIC/Price ratio to this as we did in the January Consultation. This change, taken in isolation, increases charges overall by 1.5% with the largest increase (on the SMA-16) being approximately 5%.
- 2.42 On DC power, we accept that the number of batteries is likely to be incremental. However, we do not accept that this means the LRIC/Price ratio should not be applied. The model uses the Openreach price for batteries. To the extent that Openreach applies a mark-up to the cost in its charges, this mark-up should be removed in our model. We note that including the LRIC/Price ratio or not has only a very small impact on the overall charges.
- 2.43 In the January Consultation, we used an unweighted average of rack and power costs, calculating the average based on Openreach prices for the different accommodation products available. However, following the additional response from BT and further consideration of accommodation charges, we have removed the rack charges from the bottom-up model. This is because these charges are one-off installation charges and BT has confirmed that these charges are included within the POH connection charges.
- 2.44 However, there is an annual charge for licence fee per square metre in Openreach's LLU accommodation charges, which had not been included in the model. This charge is listed as 'bespoke' in the Openreach price list. We have therefore gathered further data about this charge. The charge is bespoke because the rental charged varies by exchange to reflect the variation in accommodation costs. The charges are based on the market rates for property in each location and range from a few pounds per square metre in some locations to several hundred pounds per square metre, for example in Central London. The average provided by BT is £68.40 per square metre per annum. Whilst data provided by one other CP indicated the average it pays may be lower than this for its specific installations, we have used BT's figure as this captures the average across all its exchanges.
- 2.45 We have re-assessed the charge for power, which was the charge for usage and so is appropriate to include in our cost estimates. Whilst C&W argues the lowest cost option should be used as BT could be expected to always achieve the most efficient level of operation, BT has argued that because forecasting future demand is difficult, the most efficient solution may not always be achieved. To account for this we have used the second lowest, rather than the lowest power charge, of 9p per watt (after the Price/LRIC factor is applied).
- 2.46 In relation to air conditioning we accept that there may be some costs incurred from the cooling and that this should be included in the additional POH charges. To estimate what this is likely to be, we have included the cost of the initial installation as the charge from the Openreach price list (reduced by the LRIC/Price ratio) and have

assumed this will be recovered over ten years, which we consider to be broadly consistent with the asset life of BT's equipment assets in general (though specific asset types may have asset lives that differ from this assumption). We have then added in a cost of the power to run the air conditioning, based on the same power charges as for the POH equipment. We propose that this approach captures the key cost elements indicated by BT in a way that is consistent with the approach taken in the rest of the model.

- 2.47 Finally, on Verizon's point, we set out in the January Consultation that we had used the Openreach products as the best available proxy for the costs that would be incurred in providing similar services. In relation to accommodation, whilst BT Wholesale does not purchase these products from Openreach for the provision of POH services, many of the elements used (obtained from BT Operate) will be common. Given the changes we have made, as set out above, we do not consider that further detailed analysis of the underlying costs of the Openreach products would lead to significant further changes in the cost base of POH.

## **Maintenance costs**

### Approach in the January Consultation

- 2.48 We discussed maintenance costs in paragraphs A6.24 to A6.32 of the January Consultation. We estimated a mean time between failure ("MTBF") for each constituent part of a POH multiplexer to calculate the probability of a part failing in one year. We calculated the engineering call-out costs by assuming a time to repair and an average engineers' rate of £50 per hour. We also estimated the number of duct faults per year, assuming a duct fault rate of one fault per 100km per year. Based on these assumptions, we calculated the costs of repairing a POH duct as £0.23p per annum. This figure was based on our assumed POH distance of 980 metres and was applied to all ISH extended and CSH POHs. We did not apply it to ISH POHs.

### Stakeholder comments

- 2.49 BT argued that Ofcom had underestimated the hourly engineering costs. It noted BT's price list showed the total cost per hour as being more than twice Ofcom's estimate of £50 per hour.<sup>15</sup> It noted that this might be because Ofcom had not included any cost for supervision, training and annual leave or may not have included costs such as national insurance and pension contributions. It considered that the cost of a four hour call would be around £440, giving an hourly rate of £110 (more at weekends and bank holidays).
- 2.50 BT also noted that the equipment maintenance costs included no allowance for the cost of motor transport and vehicles necessary for the engineering staff to travel to the equipment site in order to carry out the maintenance activity.
- 2.51 No other respondent commented on the £50 figure.

### *Fibre Maintenance costs and equipment fault rates*

<sup>15</sup> BT highlighted the entry on "Engineering Call out prices" for work on private, data and telex networks in section 15 part 8(b) of BT's price list at [http://www.bt.com/pricing/current/Misc\\_boo/2-1393\\_d0e1.htm](http://www.bt.com/pricing/current/Misc_boo/2-1393_d0e1.htm)



- 2.52 BT subsequently submitted further information on the fibre maintenance costs, which it believed had been seriously underestimated. It argued that £0.23 per POH per year (or a total of £3 per fibre during the economic life of the fibre) was inadequate. It noted that although blown fibre capital costs were recovered through the customer equipment charges, the maintenance costs of the blown fibre element formed part of the cost of the additional POH costs and should be included.
- 2.53 BT therefore estimated the (notional) fibre cost of the blown fibre so that a notional depreciation charge could be calculated and the direct maintenance costs derived from that value. It said those calculations showed incremental fibre maintenance costs of £113 per Type 1 and £109 per Type II POH respectively. BT argued that these estimates reflected the costs actually incurred in maintaining the access fibre network.
- 2.54 BT also provided data on the number of PPC faults. It noted it was possible to estimate the fault rates on 4x2 and 16x2 equipment by examining the fault rates on Local End equipment. It noted that its analysis of actual fault reports showed the annual rate of faults per Local End equipment box was around 10% per year for 2Mbit circuits (and around 9% for 64k circuits). BT therefore argued that the MTBF for the POH equipment should be amended to 10 years in Ofcom's equipment maintenance calculations, compared to our initial estimates of 50 years for the 4x2 equipment and 20 years for the 16x2. It noted that these estimates did not include other costs relating to faults not found, and items such as extreme weather events and malicious damage and that although these events were rare they did increase the costs that BT incurred to maintain the service.

### Ofcom's response

- 2.55 We do not consider that the BT proposed engineering rate of £110 is reasonable based on our knowledge of the industry. BT has highlighted an engineering rate for services related to callout for work on the private, data and telex networks of BT's business customers, not for the repair of regulated wholesale services. BT's retail prices are unregulated and there is no requirement for them to be based on incremental costs. As such, BT's proposed rate is not necessarily a relevant benchmark for the incremental costs of a wholesale repair service. We have however, slightly revised our estimate. Based on the latest data available to us, an hourly rate of £50 to £60 would not be inconsistent with the hourly rates for engineers carrying out similar tasks and so we have used a rate of £55.

### *Fibre Maintenance costs and equipment fault rates*

- 2.56 We have examined the data BT provided to support its calculations on the bearer maintenance costs. BT starts from a top down allocation of costs to bearers. BT then removed those operational costs which it does not consider to be incremental. The ratio of the remaining costs to the annual fibre depreciation is then calculated. BT uses this ratio, and the capital costs for fibre derived in the bottom up model, to estimate the figures of £113 and £109 per annum.
- 2.57 We are not convinced that BT's approach provides an accurate estimate of incremental costs. As we set out in the January Consultation, we have some concerns over the use of BT's data in assessing LRIC for the additional POH costs. In addition, it is not clear to us from the data presented by BT that the costs that are truly incremental can be accurately estimated by BT's approach. For example, there are large amounts of costs assigned to accommodation and various support

categories that BT considers to be incremental, but we consider that there may be some uncertainty as to whether all these costs should be included or not.

- 2.58 Nonetheless, we do accept BT's more general point that the costs of bearer maintenance in the January Consultation were very low. We have therefore re-considered the data provided by BT from a different angle. The data shows that the majority of the bearer maintenance costs would be related to maintenance of the final drop of a CSH connection into the CP's premises. We think this is reasonable because there is unlikely to be significant difference in fault rates between spine fibre and blown fibre but the costs of repair for spine fibre would be shared across more services.
- 2.59 Based on our estimates of engineering rates and times to repair bearers, BT's estimate of the annual blown fibre maintenance cost would suggest an MTBF of approximately 20 years for the access section of a POH (covering 622m, as explained above in paragraph 2.21). An MTBF of 20 years for 622m equates to eight faults per year per 100km. We think this is a reasonable assumption for fibre faults for both spine fibre and access fibre and so have used this in our bottom up model. This approach gives us different maintenance costs per annum for different architectures. For POHs using ISH, the maintenance charge is very low (£0.15), as would be expected because the fibre distance is very short and is a shared fibre infrastructure, whereas the costs for maintenance on CSH fibres is much higher, mainly driven by the final access drop (around £80, depending on the specific type of POH in question).
- 2.60 We have also assessed the data BT provided in relation to the equipment MTBFs. The data provided allows only faults attributed to the POH connection to be assessed and, based on this, BT has calculated the 9% and 10% figures discussed above in paragraph 2.54. We accept that this information is broadly correct and would indicate a MTBF of 10 to 11 years.
- 2.61 We analysed the data on PPC failures provided by BT. Using detailed SDH element failure information we calculated the number of PPC failures we would expect from all SDH POH. Subtracting the SDH PPC failures from the total number of PPC failures leaves those caused by PDH POH. We used the average fill factor (calculated by dividing the theoretical number of circuits that could be supported by all POH by the actual number of circuits carried by each POH) on these PDH failures to estimate the overall PDH POH failure rates. Finally we halved this figure to take account of the fact that BT provides the PDH equipment at both ends of the circuit, to estimate the failure rate of an individual PDH element as 12.8 years.
- 2.62 As a sense check we have compared this to the overall MTBF of the SDH equipment of around 27 years. Thus, PDH equipment has a failure rate of approximately twice that of the SDH equipment. We consider that this is consistent with SDH equipment being a newer technology. Therefore, we have used 12.8 years as the MTBF for both the 4x2 and 16x2 equipment.

## **Network management**

### Approach in the January Consultation

- 2.63 As set out in paragraphs 4.41 and A6.33 of the January Consultation, we estimated network management costs as 23% of operational costs based on a confidential survey showing a breakdown of network operator operational costs.

## Stakeholder comments

- 2.64 BT noted that the Ofcom model did not have any costs of network management included for Type I POHs. It believed this reflected a misunderstanding that the equipment maintenance costs already recovered those costs. BT stated that the equipment maintenance charges only included the cost of the first line maintenance costs (based on the contract with the equipment supplier) and none of the network overhead costs were included. It noted that this dated back to Ofcom's Phase II determination in 2002 when network management costs were specifically excluded from the equipment rental costs and were to be recovered through the Local End POH uplift.<sup>16</sup>
- 2.65 C&W disagreed with the calculation of network management charges. It argued that intuitively 23% of operational costs to calculate network management costs appeared too high. It noted that it had sought to provide Ofcom with an internal view of an appropriate figure but its internal estimates had identified that there was not a clear definition of the term 'network management'. It believed that Ofcom needed to clarify the categories of cost that were included in its percentage assumption to ensure that double counting was not occurring.
- 2.66 C&W noted that one view from its business was that the incremental cost to BT of providing POH services beyond the cost of providing its network management for other BT services would be negligible. It noted that BT, like itself, would have fixed costs for providing its network management centre and maintenance contracts and those arrangements were unlikely to vary by volume. It believed that PPC POH equipment represented only a very small proportion of all the equipment in BT's network and even if charges were on a FAC basis rather than LRIC it was hard to believe that the costs could be as high as Ofcom proposed. It suggested that a better approach was to consider what percentage of BT's overall network PPC POHs accounted for and what would that percentage increase BT's overall network management costs by. It argued that unless BT was able to provide robust evidence of genuine costs, Ofcom should adopt a much lower uplift for network management costs.
- 2.67 Global Crossing also expressed surprise at the 23% figure, which it considered suggested significant inefficiencies. It proposed a solution that CPs should be asked, or given the option, to take over management of circuits.
- 2.68 Verizon expressed doubts that the network management costs could properly be regarded as incremental to POHs. It noted that the correct test was whether the cost would continue to be incurred were POHs not supplied, Verizon suspected that these costs would continue to be incurred regardless of the POH services and therefore that they should fall outside of the current exercise altogether. In any event, it doubted that a figure of 23% was correct, as for this type of asset it would expect a much lower figure.

## Additional information from BT

- 2.69 In response to the comments about network management, BT provided further information which looked at the SDH plant group and analysed the costs by cost sector to derive a proportion of cost that related to network management. The information provided showed that the ratio of network management costs to

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<sup>16</sup> Section 3.31 to 3.48 of Ofcom's Phase II Determination of December 2002, [www.ofcom.org.uk/static/archive/oftel/publications/broadband/leased\\_lines/ppc1202/ch3.htm](http://www.ofcom.org.uk/static/archive/oftel/publications/broadband/leased_lines/ppc1202/ch3.htm)

operating costs was 27%, 27% and 17% for the last three years respectively, with an average of 23%. It therefore considered that 23% was a reasonable estimate. It noted that the costs it had included were those associated with the exchange (the accommodation, power, cooling plant and maintenance costs) together with network management costs to calculate a percentage of those total network operating costs that were attributable to network management. It noted that SDH equipment depreciation costs and general management costs had not been included.

### Ofcom's response on network management

- 2.70 We had originally excluded network management charges from the Type I additional POH charges because we had understood them to be part of the separate maintenance charge. However, in light of BT's comments, we have looked again at the BT maintenance charges and note that these do not align closely with those calculated by the bottom-up model without the inclusion of network management charges. Therefore we consider it is appropriate to include network management within the Type I charges.
- 2.71 The inclusion of network management charges for Type I POHs highlighted that the bottom-up model did not assign network management charges uniformly. Specifically CSH POH did not attract double the network management charge of ISH as we would expect given that it includes double the equipment count. We have therefore corrected this error.
- 2.72 As to the appropriate network management charge, there was general consensus from CPs that the figure of 23% was too high, particularly as an estimate of the costs incrementally incurred in the support of POHs. However, no CP has been able to provide a robust alternative estimate of the level of purely incremental costs. Given this lack of data, it is difficult to estimate accurately an appropriate figure for network management to apply to POH although we do not agree that such costs can simply be regarded as zero or immaterial. We note that the additional data provided by BT also indicates an average of 23% over the last three years, however, given the comments from other CPs, and noting that the most recent data from BT (for last year) shows a figure of 17%, we consider that using this figure is the most appropriate approach (given the limited data that we have available).

*Q2: Do you agree with our revised approach and estimates for the operational costs, in particular the network management costs associated with POHs? If not please explain why and provide alternative data.*

## Support costs

### Approach in the January Consultation

- 2.73 We noted that POH support costs included marketing, sales, design, installation, commissioning and support. To estimate those costs we considered the range of PPC wholesale customers and their experience. There are 18 CPs that purchase POHs from BT and we expected each of these to have a reasonably high level of experience and technical knowledge of the service. We therefore believed there would be only a limited need for resource for marketing and sales of POHs and estimated that a dedicated team of three people should be sufficient to cover the POH marketing and sales activities. We estimated that the annual cost, including overheads of a marketing or sales person would be £100k (see paragraphs 4.43-5 and A6.34-5 of the January Consultation).

## Stakeholder comments

- 2.74 BT disagreed with our proposed approach for estimating the support costs associated with POHs. It argued that its calculations were based on actual incurred costs, whereas Ofcom had taken a theoretical approach to costing and therefore some elements of costs had been excluded.
- 2.75 However, C&W, Global Crossing and Verizon all questioned the support costs associated with POHs, in particular whether resources equal to three full time staff (three Full Time Equivalents or “FTEs”) would be dedicated solely to POHs. C&W noted its understanding was that PPCs as a whole had two full time product managers in BT Wholesale and POH was only a relatively small part of that. It recognised that there were some other admin costs such as pricing, but it considered that prices should only need to be updated once per year and did not require anything close to a dedicated person just for POH. It considered that the incremental demand for support costs for POH would be no more than one FTE in aggregate. Global Crossing suggested that the majority of support needed was a consequence of numerous billing and procedural problems for which BT should be meeting costs. Verizon did not see how any sales and marketing resource could be incremental to POH, because it was not a product or service which could be bought on its own and should properly be considered to be incremental to the whole PPC product.

## BT additional information

- 2.76 In response to these comments, we asked BT whether it had any supporting information on the appropriate level of support costs attributable to POH. BT noted that in practice it was difficult to identify specific individuals with a specific activity. It noted that people in operations, legal, regulatory, product line, finance and billing, human resources, procurement, and call centres would all be involved in some form or another to provide support to the POH activity. It provided information that showed, based on the regulatory accounts, that support costs amount to around 9% of costs (once a LRIC/Price ratio had been applied). It considered that this supported the estimate of £300,000 per annum (and suggested costs may have in fact been underestimated).
- 2.77 BT also suggested that there might be some confusion amongst CPs because there were three product managers in the PPC team and CPs might think that only a proportion of that time would be directed to POH. It noted that those product managers did not do all the tasks by themselves but managed numerous people in other parts of BT to look after their product (as set out above). It suggested that if POH did not exist that resource could be removed, and that up to six FTEs could be removed if there were no POH products.

## Ofcom response

- 2.78 In response to Verizon’s point, we consider that pricing and billing support specific to POHs would be needed. We also note that it is possible to vary the number of POHs without buying additional PPCs. We note the additional information provided by BT and accept that resources outside of the product management team will be needed to support POH.
- 2.79 However, we consider that six, or even three, FTEs would be too high because we are focussed on the additional POH charges, which is only one element of the POH products and charges. We consider that the incremental component of resources needed to support additional POH charges would be significantly less than this,

particularly since we are considering what the costs would be for an efficient operator on an ongoing basis. Based on our discussions with CPs, as well as consideration of the number of people working in the specific PPC product team within BT currently (three) plus a reasonable allowance for incremental labour in the other areas such as billing and finance, we propose that a figure of one FTE should be used.

*Q3: Do you agree with our revised estimate for the support costs associated with POHs? If not please explain why.*

## Other cost issues

2.80 We address here some of the other comments about the costs used within the bottom up model that could impact the resulting charges.

### Stakeholder comments

- 2.81 BT argued that, if a LRIC ratio was to be applied to the costs in the bottom up model, it should be a LRIC/FAC ratio rather than a LRIC/Price ratio. BT also said that Ofcom's choice of 70% as the LRIC/Price ratio was unreliable as it has been highly volatile over recent years. BT recommended using the LRIC/FAC ratio for 2Mbit/s links of 85% to 90% on the basis that it uses exactly the same network equipment as POHs.
- 2.82 Verizon also questioned whether Ofcom's methodology of calculating costs using Openreach prices as an input risked 'double-counting' the allowable costs of capital. For example, Ofcom calculated the total upfront costs for duct and fibre based on the Openreach prices and then adjusted them using the assumed LRIC/Price ratio of 70%. This cost was then converted to an annual rental charge which included an allowance for the rest of BT WACC of 9.3%.<sup>17</sup> Verizon considered that the original Openreach prices would already include an allowance for cost of capital (at the lower Openreach rate) and it was not clear that the conversion to LRIC using the 70% ratio would strip out that allowance to leave an accurate estimate of the upfront cost.

### Ofcom's response

- 2.83 We have discussed above the cases where we have re-considered whether the LRIC/Price ratio should be applied. However, more generally we consider it is appropriate to apply such a ratio where we have used a price from the BT or Openreach price list in order to estimate what the underlying long run incremental costs of the particular components making up the product are likely to be. As we are starting from a published price, and are seeking to calculate LRIC figures, it would be inappropriate to use a LRIC/FAC ratio as discussed by BT. Where we have estimated costs from other data we have not needed to apply any such ratio.
- 2.84 In response to Verizon, we think that the use of the LRIC/Price ratio is the best available and most proportionate way to estimate specific costs from published charges. In relation to Excess Construction Charges ("ECCs"), which we use to calculate the cost of providing duct, we note that the costs which Openreach recovers through these will be largely made up of the costs of the sub-contractors that physically carry out the work. Whilst Openreach may add a mark-up on these to cover any additional costs it incurs, it is unlikely to need to make significant capital

<sup>17</sup> This is our current estimate of the nominal pre-tax weighted average cost of capital for the "rest of BT", as set out in Table 6.1 of our consultation document "Proposals for WBA charge control", 20 January 2011 at <http://stakeholders.ofcom.org.uk/binaries/consultations/823069/summary/condoc.pdf>

investments in fixed assets, even if there is some requirement for working capital. Therefore we do not currently consider that our approach will materially over-estimate costs.

### Further changes to the model

- 2.85 Although no stakeholder specifically commented on our approach to the WACC, we think it is appropriate that we should adjust the rate used in the January Consultation. As noted above, we used a rate of 9.3%, which is the nominal pre-tax WACC for the “rest of BT”, in order to convert some up-front costs to an annual equivalent. We believe that, in fact, it is more appropriate to use the corresponding real WACC for these purposes, as inflation is allowed for through the RPI (“Retail Price Index”) terms in the charge control basket constraint and sub-caps. This means that the charges we set do not need to allow for the effect of future inflation on the value of investments in duct and other assets. We have therefore adjusted the cost of capital to 5.8%.<sup>18</sup>
- 2.86 We are currently consulting on BT’s cost of capital as part of our Wholesale Broadband (“WBA”) charge control consultation.<sup>19</sup> It is our intention that when we finalise our assessment of the additional POH charges we will update the cost of capital used, if necessary, to reflect the updated figures that result from our analysis within the WBA charge control consultation.

*Q4: Do you have any additional comments on our cost estimates and modelling approach? In particular do any of our proposed changes to the modelling change any previous response you provided to the January Consultation on any issues not raised directly in this consultation?*

## **Proposed approach to timing and phasing**

### Approach in the January Consultation

- 2.87 We discussed our proposed approach to bringing the additional POH charges into line with LRIC in paragraph 4.62 to 4.73 of the January Consultation. We proposed three different charging options for Type I and Type II POHs:
- Option A: Reduce the price of Type I POHs whilst keeping Type II charges unchanged;
  - Option B: Reduce price of all POHs by the same percentage amount; or
  - Option C: Bring Type I and Type II charges into line with costs.
- 2.88 We considered that Option C was the most consistent with promoting efficiency, because the individual charges would be cost reflective, giving CPs the correct ‘build or buy’ decisions.

<sup>18</sup> The figure of 5.8% can be derived from the nominal pre-tax weighted average cost of capital for the “rest of BT”, the rate of inflation which we assume to be 2.5% per annum and the rate of Corporation tax which we assume to be 25%. All these figures are shown in Table 6.3 of “Proposals for WBA charge control”, 20 January 2011, p.83. This table also shows the corresponding real post-tax cost of capital of 4.4%.

<sup>19</sup> See footnotes 17 and 18 above.

- 2.89 In terms of the timing of the introduction of our proposed new additional POH charges, we noted that according to our estimates at that time, the charges would be subject to significant price adjustments, with Type I charges falling sharply and Type II charges rising by about 42%. Given the scale of those adjustments, we considered whether and how their implementation should be phased.
- 2.90 We considered there was no reason to delay the introduction of the lower prices for Type I POH services and proposed that these should be adjusted to LRIC at the time we published our statement (or shortly after). We noted that this would mean POH users would get the full benefit of the price decreases and give improved incentives to make the efficient choice of technology.
- 2.91 For Type II POH services, however, we were concerned that the one-off increase in charges could be disruptive to CPs and this could disadvantage them when compared to BT (which does not incur such charges). We therefore considered that there was potential for this to weaken competition and we considered that phasing the charges might be preferable. We also noted that advance notification of price increases would allow CPs to put in place any necessary pass-through mechanisms for price changes, and any potential changes to their own network plans. We therefore proposed that Type II charges should be increased in two phases, with half the adjustment occurring immediately (or soon after) the publication of our statement and the other remaining increase by 1<sup>st</sup> April 2012.

### Stakeholder comments

- 2.92 BT strongly disagreed with the phased approach to Type II price increases. It argued there was no justification for this approach, it was not underpinned by any regulatory principles, and was discriminatory and disproportionate. In particular it argued there was no evidence that any CP would be worse off if the changes were implemented without phasing, therefore removing any risk of bill shock. It also claimed that some CPs would gain more than others and by delaying price increases certain CPs would be handed a competitive advantage by Ofcom. It noted that Ofcom's approach would mean that the Type II POHs would be priced below their LRIC cost for longer than necessary, which reduced the incentive for CPs to improve efficiency by migrating circuits. It considered it was unreasonable that the customers who would gain the most from the re-pricing of the Type I POHs should also benefit from the delay in bringing charges into line with costs for the Type II POHs.
- 2.93 In addition, BT argued that PPC operators had been aware that prices were to be rebalanced for a considerable period, with lower prices for circuits handed over on Type I POH since July 2010. It noted PPC operators had had the incentive to migrate to Type I POH since BT announced the new pricing structure following the industry consultation.
- 2.94 BT believed that the price changes to the inefficient Type II POHs should be implemented at the same time as the price decreases in Type I POHs and that BT should then be able to change Type I POH prices by an amount consistent with the price control constraints. BT submitted that it would not be able to recover the revenue shortfall caused by the pricing of Type II POH below LRIC costs by increasing other PPC charges because the 90 day price notification obligation ruled out price changes within this charge control year (which ends on 30 September). In addition, it argued that the tight sub caps in the TI basket covering the majority of revenue effectively ruled out any offsetting increases in other charges.



- 2.95 BT therefore argued that, in addition to the proposed POH waivers, Ofcom should also waive the 90 day notification period for the TI basket and the application of the sub caps to avoid a shortfall in cost recovery. It considered that the waivers were justified because Ofcom was proposing a change to the regulatory regime very late in the charge control year, which would not have been foreseen at the start of the year.
- 2.96 All the other CPs supported the phased approach for the Type II price increases. C&W noted it was Ofcom's standard practice that where charges were materially out of line with costs, they would be brought back into line via a one off adjustment. C&W considered that the proposal to phase the price increases importantly provided CPs with a reasonable amount of time to make adjustments to their network in relation to the use of inefficient handovers. However, Global Crossing argued that the price increases should come in at the end of the charge control period (September 2012) rather than April, to allow CPs time to groom their infrastructures.
- 2.97 In terms of the waiver of the notification period, C&W noted that if our proposals were implemented in late summer (before October 2011) then Ofcom would have modelled the latest prices and it would not be appropriate for BT to have the ability to immediately raise the charges. Global Crossing supported a waiver for Phase I, however, it considered that since there would be ample time for Phase II to be properly notified it would not expect that waiver to extend before the initial one-off changes.

### Ofcom's response

- 2.98 The proposed changes to our modelling assumptions change the Type II POH charges. They are now lower than the charges on which we consulted in January and are closer to the current charges. We consider that because the proposed increases in Type II charges are not as significant they are not as likely to be disruptive to CPs or to weaken competition. In addition, we consider that the publication of our January Consultation, as well as this supplementary consultation, will have given CPs sufficient warning that there are likely to be price rises for Type II services and time to prepare for any resulting changes in their network plans that may be necessary. As a result, we do not believe it is necessary to phase in the level of Type II prices.
- 2.99 Therefore, subject to comments on the January Consultation and this consultation, we propose to implement the new additional POH charges for both Type I and Type II services from 1<sup>st</sup> October 2011 and these charges will apply until 30<sup>th</sup> September 2012. These charges would not be increased (in nominal terms) during the final year of the charge control.
- 2.100 As we are proposing to set the charges for one year from October 2011, we need to adjust these so that they reflect the average general price level for that year, because our inputs are based on current charges (for example charges from the Openreach price list as of 1 April 2011) which are likely to be updated during the year for which the charges we are setting will apply. Therefore we have adjusted the charges to take account of inflation. We have used the most up to date figure for RPI currently (around 5.2%<sup>20</sup>), but we will use the official figure from June 2011 once this has been published and will amend the charges to reflect that adjustment in the final statement. We do not consider that updating RPI to reflect the June 2011 data would require further consultation on charges.

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<sup>20</sup> Office of National Statistics, 14 June 2011:  
<http://www.statistics.gov.uk/StatBase/tsdataset.asp?vlnk=229&More=N&All=Y>.

- 2.101 We do not consider that the modelling changes we have proposed above change our proposed charging approach for the additional POH costs, i.e. we are still proposing to bring charges into line with LRIC (Option C as outlined in paragraph 2.87 above). However, in Annex 5 we have set out the charges under three different options for stakeholder reference.

*Q5: Do you agree with our proposal to remove the phasing for Type II POH charges and to introduce both charges concurrently from 1<sup>st</sup> October 2011? If not, please explain why.*

*Q6: Do you agree that BT should not be allowed to exceed the Type I and Type II POH charge levels proposed by Ofcom during the period between 1<sup>st</sup> October 2011 and 30 September 2012?*

## Summary of changes

### Revised modelling and cost estimates

- 2.102 As discussed in the preceding paragraphs, we have made a number of revisions to our modelling inputs and assumptions on the basis of stakeholder comments. These are summarised in Table 3 below. We have also published a revised version of our model alongside this consultation.<sup>21</sup>

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<sup>21</sup> <http://stakeholders.ofcom.org.uk/binaries/consultations/revision-points-handover-pricing/annexes/model.xls>

**Table 3: Summary of key changes to the Ofcom model**

<b>Cost category</b>	<b>Original Assumption/Input</b>	<b>Updated Assumption/Input</b>
<b>Capital costs</b>		
<b>Fibre and duct</b>	Used Openreach ECCs for duct and sub-duct for blown fibre.	Removed the sub-duct contribution of £3.50/m as a result of changing from blown fibre to a fibre cable.
	POH distance of 10m for ISH and 980m for ISH extended and CSH.	POH distance of 50m for ISH, 1503m for ISH extended and 1503m plus 622m of access fibre for CSH.
<b>Cables</b>	Initially used blown fibre at £4 per metre for 4 fibres.	Updated costs for 24 and 48 fibre cables.
<b>Tie-cables</b>	Not included in original model.	Tie cable rental of £24 per year included for each POH.
<b>Operational costs</b>		
<b>Accommodation related costs</b>	Used unweighted average charge of rack and power from Openreach LLU price list.	Removal of one-off rack charges, used second to minimum power charge and inclusion of £68.40 licence fee per square metre.
	Used one-off air conditioning charge.	Air conditioning annual rental and power usage calculated.
<b>Maintenance costs</b>	Engineering rate £50 per hour not including travel.	Engineer costs £55 for one hour including travel.
<b>Fibre maintenance</b>	Estimated at 1 fault per 100km per year.	Estimate changed to 8 faults per 100km per year after analysis of data from BT.
<b>Equipment failure rates</b>	PDH MTBF of 50 years for 4x2 and 20 years for 16x2.	MTBF for PDH reduced to 12.8 years for 4x2 and 16x2 after analysis of data from BT.
<b>Network Management</b>	Only included for Type II POHs.	Included for both Type I and Type II POHs.
	Network management equal to 23% of operational costs.	Network management equal to 17% of operational costs.
	Only assigned network management charge to BT located equipment.	Assigns network management charges to all BT operated equipment.
<b>Support costs</b>	3 FTE's at £300k p.a.	1 FTE at £100k p.a.
<b>Other</b>		
	Nominal WACC of 9.3%.	Real-terms WACC of 5.8%.
	Adjustment for inflation not included in proposed charges.	Adjustment for inflation included in proposed charges.

2.103 This results in the range of proposed charges in the table below:

**Table 4: Revised proposals for the additional POH charges**

Type I POHs (£ per POH)	SMA-1	SMA-4	SMA-16	Bearer
Proposed charges				
- Lower estimate	£382	£453	£1280	£221
- Base case estimate	£402	£477	£1350	£232
- Upper estimate	£422	£501	£1415	£244
Type II POHs (£ per circuit)	Sub 2M	2M	34M	155M
Proposed charges				
- Lower estimate	£114	£193	£997	£1818
- Base case estimate	£120	£203	£1029	£1914
- Upper estimate	£138	£234	£1183	£2201

2.104 Our base estimate is derived from the specific assumptions we have used in our model based on responses to the January Consultation. The updated assumptions we are consulting on may impact different charges in different ways. For example, a change in the assumed MTBF of PDH equipment primarily impacts the Type II POH charges. Therefore, it may be that different charges are impacted in different ways, depending on which, if any, assumptions are updated following this consultation.

### Changes to the Significant Market Power (“SMP”) condition

2.105 As we are proposing to update the charges that will apply and the way in which the changes to the Type II charges will be applied, we have modified the statutory notification of the proposed amendments to the relevant SMP conditions accordingly. The proposed modifications are set out in Annex 6.

### Ofcom’s duties and the legal tests

2.106 In the January consultation, in Section 2, we set out how we had taken account of our general duties under Section 3 of the Act and the European Community requirements for regulation in Section 4 of the Act and we consider that the changes we are now proposing do not impact on that assessment. We noted that in considering the options for the assessment of the additional POH costs, and in particular by ensuring the prices for additional POHs were cost reflective, we were taking into account our principle duty to further the interests of citizens and consumers in relevant markets, where appropriate by promoting competition. We also noted that, with regard to the six European Community requirements for regulation<sup>22</sup>, we had taken these into consideration in recommending our proposed approach and in particular we focused on the promotion of competition and encouraging network access and service interoperability, which are particularly relevant when considering POH costs and charges.

2.107 In addition, in Section 5 of the January consultation we set out why our proposals met the tests set out in section 88 and section 47 of the Act. We also consider that

<sup>22</sup> Which are: to promote competition; to contribute to the development of the internal market; to promote the interests of all EU citizens; not to favour one type of network, service or associated facility over another; to encourage network access and service interoperability in order to promote efficiency and competition; and, to encourage compliance with relevant international standards.

the majority of the changes we are now proposing do not impact on that assessment. We have indicated below, however, where we think there are some changes to our assessment, although we consider these to be minimal.

## Section 88 tests

2.108 For the reasons set out in paragraphs 5.8 to 5.17 of the January Consultation, we consider that the proposed additional POH charges are appropriate for promoting efficiency, for promoting sustainable competition, that they confer the greatest possible benefits on users of public electronic communications services and that they ensure the correct incentives for investment and innovation are set. These reasons, with additional information where relevant to explain the impact of the changes to our proposals as set out above, are:

- **Efficiency:** Under the proposed LRIC approach, CPs will only pay for costs they cause to be incurred in the long run rather than contributing to the recovery of common costs. As this means overheads cannot be recovered through POH charges, BT is incentivised to reduce those overheads. However, CPs are required to bear costs they directly cause and so they are also incentivised to minimise such costs. We have set the charges based on our latest estimates of the costs that are directly incurred in the efficient provision of POH services.
- **Sustainable competition:** Basing charges on LRIC means CPs face the costs they directly cause BT to incur but do not contribute to overheads. This means the cost disadvantage that CPs face when trying to compete is reduced compared to if BT recovers inefficiently incurred costs or overheads from CPs. Basing prices on LRIC would be likely to provide CPs with the correct build or buy incentives which we consider provides an appropriate basis for sustainable competition to develop. We note that because we are now proposing to introduce Type I and Type II POH charges in line with LRIC from 1<sup>st</sup> October 2011, there will no longer be a period in which the charges for additional POH services will not, in aggregate be sufficient to cover the LRIC of providing those services. We consider that because the proposed Type II POH charges are no longer subject to the same level of significant increases, they will be less likely to weaken competition by introducing them as soon as possible and that the January Consultation, as well as this document, will have given sufficient advance notice to CPs of the potential price increases in Type II POH charges.
- **Confers greatest possible benefits on users:** Users are likely to gain the greatest benefit where prices are based on costs. Our proposal to remove the phased approach to changing Type II charges reflects the reduction in the proposed charges, so the potentially significant immediate increases about which we were concerned in the January Consultation no longer arise. These price increases will no longer be disruptive to CPs given the advance notification.
- **Incentives to invest:** In modelling BT's costs we have allowed for BT to make a reasonable return on capital employed and, to the extent that BT can increase its efficiency through investment or innovation in the provision of these services it benefits from the efficiency savings. By setting charges to more accurately reflect costs, CPs get the correct signals to invest in the most efficient products.

## Section 47 tests

2.109 For the reasons set out in paragraphs 5.18 to 5.27 of the January Consultation we consider that the proposed additional POH charges are objectively justified, are not unduly discriminatory, are proportionate and are transparent. These reasons are:

- **Objectively justified:** BT provides POH services to support services in markets in which it has been found to have SMP but it does not consume POH products internally. Setting charges based on the costs directly incurred by CPs in purchasing these POH products is justified in that it allows BT to recover its direct costs whilst reducing the prices paid by competitors to BT.
- **Undue discrimination:** Our approach is not unduly discriminatory as our approach is to set charges such that BT is able to recover the costs directly incurred in providing these POH products in a way that is consistent with promoting sustainable competition.
- **Proportionate:** The approach is proportionate as it allows BT to recover its costs directly incurred in providing POH services whilst setting charges at a reasonable level to allow other CPs to compete in the provision of Traditional Interface (“TI”) leased lines services. We consider that our approach to updating our modelling assumptions to reflect comments from stakeholders via this short consultation is proportionate in that we are providing those stakeholders opportunity to comment on these updated proposals without unnecessarily delaying the implementation of updated charges.
- **Transparent:** We consider our approach to setting charges, the mechanism for setting them and the charges themselves is transparent as we have discussed our objectives and our approach in detail in both the January Consultation and, in relation to our proposed changes, in this consultation. This is in addition to publishing the model which we have used to calculate the charges. Moreover, the proposed modifications to the affected SMP Conditions (as set out in the notification at Annex 6) are clear in relation to what they are intended to achieve, particularly when they are read as a whole with the SMP Conditions being amended.

## Conclusion

2.110 On the basis of the reasoning set out above, we are now proposing to amend the additional POH charges and the implementation of those charges through the revision of the SMP conditions on BT as set out in Annex 6. We are seeking stakeholder comments on our revised modelling and costs estimates of the additional POH charges, and on our proposal, if we pursue this approach, to implement the changes to both Type I and Type II POHs from 1<sup>st</sup> October 2011.

2.111 As this consultation is an extension of the January Consultation and we are only seeking stakeholder comments on the specific revisions to the additional POH cost estimates and the timing of the implementation of those charges, we consider that a consultation period of four weeks is sufficient and appropriate. We are therefore seeking responses to this consultation by **20 July 2011**.

2.112 Following our consideration of the responses to this consultation, we will notify our proposals (after making any modifications of them that we consider are appropriate)

to the European Commission, BEREC<sup>23</sup> and the regulators in other Member States for EU consultation under section 48B of the Act. In that notification, we will address the responses we have received during this consultation, as well as all other stakeholder comments made in response to our January Consultation which we have not addressed in this document. We hope to give effect to our proposals (with any appropriate modifications to address any comments we may receive by those EU bodies) by making our decision in the autumn.

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<sup>23</sup> The Body of European Regulators for Electronic Communications.

## Annex 1

# Responding to this consultation

## How to respond

- A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 20 July 2011**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at <http://stakeholders.ofcom.org.uk/consultations/revision-points-handover-pricing/>, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A1.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email [Elizabeth.gannon@ofcom.org.uk](mailto:Elizabeth.gannon@ofcom.org.uk) attaching your response in Microsoft Word format, together with a consultation response coversheet.
- A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.
- Elizabeth Gannon  
Floor 4  
Competition Group  
Riverside House  
2A Southwark Bridge Road  
London SE1 9HA
- Fax: 020 7783 3574
- A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.
- A1.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 4. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

## Further information

- A1.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Elizabeth Gannon on 020 781 3501.

## Confidentiality

- A1.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, [www.ofcom.org.uk](http://www.ofcom.org.uk), ideally on receipt. If you think your



response should be kept confidential, can you please specify what part or whether all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

- A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at <http://www.ofcom.org.uk/about/accoun/disclaimer/>

## Next steps

- A1.11 Following the end of the consultation period, Ofcom intends to publish a statement in autumn this year.
- A1.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: [http://www.ofcom.org.uk/static/subscribe/select\\_list.htm](http://www.ofcom.org.uk/static/subscribe/select_list.htm)

## Ofcom's consultation processes

- A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.
- A1.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at [consult@ofcom.org.uk](mailto:consult@ofcom.org.uk) . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.
- A1.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Graham Howell, Secretary to the Corporation, who is Ofcom's consultation champion:

Graham Howell  
Ofcom  
Riverside House  
2a Southwark Bridge Road  
London SE1 9HA

Tel: 020 7981 3601

Email [Graham.Howell@ofcom.org.uk](mailto:Graham.Howell@ofcom.org.uk)

## Annex 2

# Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

### Before the consultation

A2.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

### During the consultation

A2.3 We will be clear about who we are consulting, why, on what questions and for how long.

A2.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A2.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A2.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A2.7 If we are not able to follow one of these principles, we will explain why.

### After the consultation

A2.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

## Annex 3

# Consultation response cover sheet

- A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, [www.ofcom.org.uk](http://www.ofcom.org.uk).
- A3.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.
- A3.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.
- A3.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the ‘Consultations’ section of our website at [www.ofcom.org.uk/consult/](http://www.ofcom.org.uk/consult/).
- A3.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don’t have to edit your response.

**Cover sheet for response to an Ofcom consultation**

**BASIC DETAILS**

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

**CONFIDENTIALITY**

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing	<input type="checkbox"/>	Name/contact details/job title	<input type="checkbox"/>
Whole response	<input type="checkbox"/>	Organisation	<input type="checkbox"/>
Part of the response	<input type="checkbox"/>	If there is no separate annex, which parts?	

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

**DECLARATION**

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

## Annex 4

# Consultation questions

A4.1 Here is a list of the consultation questions:

*Q1: Do you agree with our revised proposals for the capital costs, in particular the annual rental charges for duct and fibre? If not, please explain why and provide alternative data.*

*Q2: Do you agree with our revised approach and estimates for the operational costs, in particular the network management costs associated with POHs? If not please explain why and provide alternative data.*

*Q3: Do you agree with our revised estimate for the support costs associated with POHs? If not please explain why.*

*Q4: Do you have any additional comments on our cost estimates and modelling approach? In particular do any of our proposed changes to the modelling alter any previous response you provided to the January Consultation on any issues not raised directly in this consultation?*

*Q5: Do you agree with our proposal to remove the phasing for Type II POH charges and to introduce both charges concurrently from 1<sup>st</sup> October 2011? If not, please explain why.*

*Q6: Do you agree that BT should not be allowed to exceed the Type I and Type II POH charge levels proposed by Ofcom during the period between 1<sup>st</sup> October 2011 and 30 September 2012?*

## Annex 5

# Charging options for POH costs; effect of modelling changes

## Introduction

A5.1 In the January Consultation, we set out three charging options for the additional POH charges and we indicated our preferred approach was to bring both Type I and Type II charges into line with costs. Our preference for this option has not changed as a result of the adjustments to the modelling which are being proposed as part of this consultation.

A5.2 We are therefore not presenting the different options for consultation again, however, below we have set out the updated costs (taking into account the changes to our modelling assumptions discussed in the main document) under the different options we originally proposed.

**Table A5.1: Charging options for POH costs with updated modelled costs**

Option	Description	Type I POH costs	Type II POH costs	Comment
<i>Current</i>		<i>£4.8m</i>	<i>£1.9m</i>	
Option A	Reduce price of Type I POHs whilst keeping Type II charges unchanged	£0.9m	£1.9m	Type I users benefit from cost reduction, but pay more than under Option C. Type II users are no worse/better off.
Option B	Reduce price of all POHs by the same % amount	£1.9m	£0.8m	Both Type I and Type II users benefit from price reductions. Type I users pay more than under Options A and C.
Option C	Bring Type I and Type II charges into line with costs	£0.6m	£2.2m	Charges are cost reflective. However charges for Type II users increase slightly (by £0.2m).

## Annex 6

# Proposal for the modification of SMP price control condition

## NOTIFICATION UNDER SECTION 48A OF THE COMMUNICATIONS ACT 2003

### Proposals to modify SMP conditions applying to BT under section 45 of the Communications Act 2003.

#### Background

1. On 8 December 2008, the Office of Communications (“Ofcom”) published its statement entitled ‘*Business Connectivity Market Review – Review of the retail leased lines, wholesale symmetric broadband origination and wholesale trunk segments markets*’ (the “**BCMR Statement**”).<sup>24</sup>

2. At Annex 8 to the BCMR Statement, Ofcom published a notification (the “**BCMR Notification**”) identifying, in accordance with section 79 of the Communications Act 2003 (the “**Act**”), a number of services markets in each of which Ofcom determined that, for the purpose of making market power determinations under the Act, BT<sup>25</sup> has Significant Market Power (“SMP”). Specifically, those services markets are:

- (a) the provision of traditional interface symmetric broadband origination with a bandwidth capacity up to and including eight megabits per second within the United Kingdom but not including the Hull Area<sup>26</sup>;
- (b) the provision of traditional interface symmetric broadband origination with a bandwidth capacity above eight megabits per second and up to and including forty five megabits per second within the United Kingdom but not including the Hull Area and the Central and East London Area<sup>27</sup>;
- (c) the provision of traditional interface symmetric broadband origination with a bandwidth capacity above forty five megabits per second and up to and including one hundred and fifty five megabits per second within the United Kingdom but not including the Hull Area and the Central and East London Area;
- (d) the provision of alternative interface symmetric broadband origination with a bandwidth capacity up to and including one gigabit per second within the United Kingdom but not including the Hull Area;

<sup>24</sup> <http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr08/summary/bcmr08.pdf>

<sup>25</sup> “**BT**” means British Telecommunications plc, whose registered company number is 1800000, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989 (see paragraph 21(a) of the BCMR Notification).

<sup>26</sup> “**Hull Area**” means the area defined as the ‘Licensed Area’ in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and Kingston Communications (Hull) plc (see paragraph 21(b) of the BCMR Notification).

<sup>27</sup> “**Central and East London Area**” means the area in London consisting of the postal sectors set out in the Appendix to the BCMR Notification (see paragraph 21(d) of the BCMR Notification).

- (e) the provision of wholesale trunk segments at all bandwidths within the United Kingdom; and
- (f) the provision of traditional interface retail leased lines up to and including a bandwidth capacity of eight megabits per second within the United Kingdom but not including the Hull Area.

3. As a result of those market power determinations, in accordance with section 48(1) of the Act, Ofcom set on BT pursuant to section 45 of the Act the SMP conditions set out in Schedules 1 to 6 to the BCMR Notification, each Schedule of which containing SMP conditions that correspond to the respective services markets mentioned in paragraph 2 above (such that SMP conditions applying on BT to TISBO up to and including 8 Mbit/s being set out in Schedule 1 to the BCMR Notification, and so on). Those SMP conditions did not include any price controls, although Ofcom concluded that, in principle, BT should be subject to charge controls in the markets for low bandwidth, high bandwidth and very high bandwidth 155 Mbit/s TISBOs, TI trunk segments and low bandwidth AISBOs. Ofcom considered that such controls would be necessary to address the nature of the problems identified in the above-mentioned market power determinations (except for the retail leased lines), but that the details and design of such controls would be subject to a separate statement and separate notification.

4. On 2 July 2009, Ofcom published a statement entitled '*Leased Lines Charge Control – A new charge control framework for wholesale traditional interface and alternative interface products and services*' (the "**LLCC Statement**"), which included a publication at Annex 9 to that document of a notification under section 48(1) of the Act setting out Ofcom's new SMP conditions for the purpose of imposing on BT charge controls to address the above-mentioned problems (the "**LLCC Notification**").<sup>28</sup>

5. On 2 September 2009, Cable & Wireless UK ("**C&W**") brought an appeal against the LLCC Statement (the "**LLCC Appeal**") to the Competition Appeal Tribunal (the "**CAT**") under section 192 of the Act.

6. On 20 September 2010 the CAT disposed of the entire appeal (the "Ruling") and remitted the decision under appeal to Ofcom with the below directions in relation to POHs (the "CAT Order"). These are as follows:

"...

4. In relation to the error found in Reference Question 4(a)(i), the Tribunal directs

*OFCOM to assess the reasonableness of the revised BT estimated costs and the determination of the appropriate figure for the new POH charges.*

5. In relation to the error found in Reference Question 4(a)(iii), the Tribunal directs

*OFCOM to assess the various regulatory options for implementing new POH charges in the light of the matters set out in the Commission's assessment of Reference Questions 4(a)(ii), (iii) and (iv) and in a manner which puts OFCOM in a position to satisfy its relevant statutory obligations.*

<sup>28</sup> <http://stakeholders.ofcom.org.uk/consultations/llcc/statement/>



6. *In relation to the error found in Reference Question 4(b)(i), the Tribunal directs*

*Ofcom to decide how POH costs should be recovered in the light of the matters set out in the Commission's assessment of Reference Question 4(b)(i).*

...”

7. On 26 January 2011, Ofcom published a consultation document entitled "LLCC PPC Points of Handover pricing review" (the "January Consultation") which included, in Annex 7 to that document, publication of a notification under section 48A of the Act setting out Ofcom's proposals to modify the SMP price control conditions on BT.

8. Following comments from stakeholders Ofcom has made some amendments to those proposals.

### **Decision**

9. Ofcom hereby, in accordance with section 48A of the Act and in relation to the services markets referred to in paragraph 2 above (except for the services market in sub-paragraph (f)) in each of which Ofcom has determined BT to be a person having significant market power, proposes to modify SMP conditions imposing the price controls specified in the Schedules to this Notification (the "**SMP Charge Control Conditions**"), such that:

- (a) **Condition G4** (Charge control) in **Schedule 1** to this Notification is modified by amending Part 2c of Annex A and Part 1 of Annex D;
- (b) **Condition GG4** (Charge control) in **Schedule 2** to this Notification modified by amending Part 2c of Annex A and Part 1 of Annex D;
- (c) **Condition GH4** (Charge control) in **Schedule 3** to this Notification is modified by amending Part 2c of Annex A and Part 1 of Annex D; and
- (d) **Condition H4** (Charge control) in **Schedule 5** to this Notification is modified by amending Part 2c of Annex A and Part 1 of Annex D.

10. The effect of, and Ofcom's reasons for making, the proposals to amend the SMP conditions set out in the Schedules to this Notification are contained in the consultation accompanying this Notification and the January Consultation.

11. The proposals set out in this Notification shall become effective from 1<sup>st</sup> October 2011.

12. In making the proposals set out in this Notification, Ofcom has considered and acted in accordance with its general duties set out in section 3 and the six Community requirements set out in section 4 of the Act.

13. Representations may be made to Ofcom about the proposals set out in this Notification and the accompanying explanatory statement by no later than 20 July 2011.

14. A copy of this Notification has been sent to the Secretary of State in accordance with section 48C(1) of the Act.

### **Interpretation**

15. Except for references made to proposed identified services markets in paragraph 2 above (and except as otherwise defined in paragraph 16 below) of this Notification, words or

expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

**16.** In this Notification—

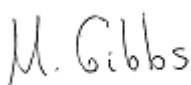
- (a) “**Act**” means the Communications Act 2003 (c.21);
- (b) “**BCMR Notification**” has the meaning given to it in paragraph 2 of this Notification;
- (c) “**BCMR Statement**” has the meaning given to it in paragraph 1 of this Notification;
- (d) “**BT**” has the meaning given to it in paragraph 2 of this Notification;
- (e) “**CAT**” means the Competition Appeal Tribunal;
- (f) “**C&W**” means Cable & Wireless UK;
- (g) “**Central and East London Area**” has the meaning given to it in paragraph 2(c) of this Notification;
- (h) “**Hull Area**” has the meaning given to it in paragraph 2(c) of this Notification;
- (i) “**January Consultation**” means the consultation Ofcom published on 26 January 2011 entitled ‘*LLCC PPC Points of Handover pricing review – Proposal for modification of SMP Conditions*’
- (j) “**LLCC Appeal**” means the appeal C&W brought to the CAT on 2 September 2010 in relation to the LLCC Statement;
- (k) “**LLCC Statement**” means the statement Ofcom published on 2 July 2009 entitled ‘*Leased Lines Charge Control – A new charge control framework for wholesale traditional interface and alternative interface products and services*’;
- (l) “**LLCC Notification**” has the meaning given to it in paragraph 4 of this Notification;  
and
- (m) “**Ofcom**” means the Office of Communications.

**17.** For the purpose of interpreting this Notification—

- (a) headings and titles shall be disregarded; and
- (b) the Interpretation Act 1978 (c. 30) shall apply as if this Notification were an Act of Parliament.

**18.** The Schedules to this Notification shall form part of this Notification.

**Signed by**



**MARINA GIBBS**

**Competition Policy Director, Ofcom**

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

22 June 2011

## Schedule 1

### (TISBO up to and including 8 Mbit/s)

#### SMP services condition G4

**Modification of condition imposed on British Telecommunications plc under the Communications Act 2003 as a result of the analysis of the market for the provision of traditional interface symmetric broadband origination with a bandwidth capacity up to and including eight megabits per second within the United Kingdom but not including the Hull Area**

1. The following new paragraph G4.1(a) shall be set by inserting it after paragraph G4.1 of Condition G4 in Part 2 of Schedule 1 to the BCMR Notification:

**“G4.1(a)** The Dominant Provider shall not charge more than:

- (a) for each of the Type I POH services, the maximum amount prescribed by Table 1 of Annex E for the corresponding Type I POH service during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012;
- (b) for each of the Type II POH services, the maximum amount prescribed by Table 2 of Annex E for the corresponding Type POH II service during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012;

2. Paragraph G4.10 of Condition G4 in Part 2 of Schedule 1 to the BCMR Notification shall be modified by inserting the following words at the beginning of that Condition:

**“G4.10** ...Subject to paragraph G4.10(a), [...].”

3. The following new paragraph G4.10(a) shall be set by inserting it after paragraph G4.10 of Condition G4 in Part 2 of Schedule 1 to the BCMR Notification:

**“G4.10(a)** Paragraph G4.10 shall not apply to:

- (a) Type I POH services during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012. For the avoidance of doubt, during that period, only the prescribed maximum amounts pursuant to paragraph G4.1(a) shall apply.
- (b) Type II POH services during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012. For the avoidance of doubt, during that period only the prescribed maximum amounts pursuant to paragraph G4.1(b) shall apply.”

4. The following new definitions shall be set by inserting them in paragraph G4.17 of Condition G4 in Part 2 of Schedule 1 to the BCMR Notification:

(n) **“Type I POH services”** means the services listed in Section B8, Part 8.01, Sub-Section 1.6 of BT’s Carrier Price List:

[http://www.btwholesale.com/pages/cmsjsps/service\\_and\\_support/service\\_support\\_hub/online\\_pricing\\_hub/cpl\\_hub/cpl\\_pricing\\_hub/cpl\\_browsable\\_sections/cpl\\_browsable\\_sectionb\\_8.jsp](http://www.btwholesale.com/pages/cmsjsps/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/cpl_browsable_sections/cpl_browsable_sectionb_8.jsp)

(o) “**Type II POH services**” means the services listed in the column entitled “3rd party POH rental fixed charge p.a.” in Section 8, Part 8.03, Sub-section 1.1 of BT’s Carrier Price List:

[http://www.btwholesale.com/pages/cmsjsps/service\\_and\\_support/service\\_support\\_hub/online\\_pricing\\_hub/cpl\\_hub/cpl\\_pricing\\_hub/cpl\\_browsable\\_sections/cpl\\_browsable\\_sectionb\\_8.jsp](http://www.btwholesale.com/pages/cmsjsps/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/cpl_browsable_sections/cpl_browsable_sectionb_8.jsp)

5. Part 2(c) of Annex A shall be deleted and replaced in its entirety as follows:

**Annex A to Condition G4**

**Products and services subject to charge control pursuant to Condition G4.1(a)**

“... ”

**Part 2c:** Rental and maintenance services in respect of the provision of Partial Private Circuits Points of Handover in each of the following bandwidths in all parts of the United Kingdom excluding the Central and East London Area (in relation to 34/45 Mbit/s and 140/155 Mbit/s products below) and the Hull Area (for all products below) as specified in Part 1 of Annex D to this Condition.

- 64 kbit/s
- 2 Mbit/s
- 34 Mbit/s – 45 Mbit/s
- 140 Mbit/s – 155 Mbit/s
- SMA-1
- SMA-2
- SMA-16
- Bearer

...”

6. The following new Annex shall be inserted after Annex D in Part 2 of Schedule 1 to the BCMR Notification:

**Annex E to Condition G4****Maximum Charges pursuant to paragraph G4.1(a)****Part 1****Table 1**

<b>Type I POHs</b>	<b>Maximum Price (£) [1<sup>st</sup> October 2011 to 30<sup>th</sup> September 2012]</b>
SMA-1	402
SMA-4	477
SMA-16	1,347
Bearer	232

**Table 2**

<b>Type II POHs</b>	<b>Maximum Price (£) [1<sup>st</sup> October 2011 to 30<sup>th</sup> September 2012]</b>
64 kbit/s	120
2 Mbit/s	203
34/45 Mbit/s	1,029
140/155 Mbit/s	1,914

## Schedule 2

### (TISBO above 8 Mbit/s up to and including 45 Mbit/s)

#### SMP services condition GG4

**Modification of condition imposed on British Telecommunications plc under the Communications Act 2003 as a result of the analysis of the market for the provision of traditional interface symmetric broadband origination with a bandwidth capacity above eight megabits per second and up to and including forty five megabits per second within the United Kingdom but not including the Hull Area and the Central and East London Area**

1. The following new paragraph GG4.1(a) shall be set by inserting it after paragraph GG4.1 of Condition GG4 in Part 2 of Schedule 2 to the BCMR Notification:

**“GG4.1(a)** The Dominant Provider shall not charge more than:

- (a) for each of the Type I POH services, the maximum amount prescribed by Table 1 of Annex E for the corresponding Type I POH service during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012;
- (b) for each of the Type II POH services, the maximum amount prescribed by Table 2 of Annex E for the corresponding Type POH II service during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012;

2. Paragraph GG4.10 of Condition GG4 in Part 2 of Schedule 2 to the BCMR Notification shall be modified by inserting the following words at the beginning of that Condition:

**“GG4.10** ...Subject to paragraph GG4.10(a), [...].”

3. The following new paragraph GG4.10(a) shall be set by inserting it after paragraph GG4.10 of Condition GG4 in Part 2 of Schedule 2 to the BCMR Notification:

**“GG4.10(a)** Paragraph GG4.10 shall not apply to:

- (a) Type I POH services during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012. For the avoidance of doubt, during that period, only the prescribed maximum amounts pursuant to paragraph GG4.1(a) shall apply.
- (b) Type II POH services during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012. For the avoidance of doubt, during that period only the prescribed maximum amounts pursuant to paragraph GG4.1(b) shall apply.”

4. The following new definitions shall be set by inserting them in paragraph GG4.17 of Condition GG4 in Part 2 of Schedule 2 to the BCMR Notification:

(n) **“Type I POH services”** means the services listed in Section B8, Part 8.01, Sub-Section 1.6 of BT’s Carrier Price List:

[http://www.btwholesale.com/pages/cmsjsps/service\\_and\\_support/service\\_support\\_hub/online\\_pricing\\_hub/cpl\\_hub/cpl\\_pricing\\_hub/cpl\\_browsable\\_sections/cpl\\_browsable\\_sectionb\\_8.jsp](http://www.btwholesale.com/pages/cmsjsps/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/cpl_browsable_sections/cpl_browsable_sectionb_8.jsp)

(o) “**Type II POH services**” means the services listed in the column entitled “3rd party POH rental fixed charge p.a.” in Section 8, Part 8.03, Sub-section 1.1 of BT’s Carrier Price List:

[http://www.btwholesale.com/pages/cmsjsps/service\\_and\\_support/service\\_support\\_hub/online\\_pricing\\_hub/cpl\\_hub/cpl\\_pricing\\_hub/cpl\\_browsable\\_sections/cpl\\_browsable\\_sectionb\\_8.jsp](http://www.btwholesale.com/pages/cmsjsps/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/cpl_browsable_sections/cpl_browsable_sectionb_8.jsp)

5. Part 2(c) of Annex A shall be deleted and replaced in its entirety as follows:

**Annex A to Condition GG4**

**Products and services subject to charge control pursuant to Condition GG4.1(a)**

“... ”

**Part 2c:** Rental and maintenance services in respect of the provision of Partial Private Circuits Points of Handover in each of the following bandwidths in all parts of the United Kingdom excluding the Central and East London Area (in relation to 34/45 Mbit/s and 140/155 Mbit/s products below) and the Hull Area (for all products below) as specified in Part 1 of Annex D to this Condition.

- 64 kbit/s
- 2 Mbit/s
- 34 Mbit/s – 45 Mbit/s
- 140 Mbit/s – 155 Mbit/s
- SMA-1
- SMA-2
- SMA-16
- Bearer

...”

6. The following new Annex shall be inserted after Annex D in Part 2 of Schedule 2 to the BCMR Notification:



**Annex E to Condition GG4**

**Maximum Charges pursuant to paragraph GG4.1(a)**

**Part 1**

**Table 1**

<b>Type I POHs</b>	<b>Maximum Price (£) [1<sup>st</sup> October 2011 to 30<sup>th</sup> September 2012]</b>
SMA-1	402
SMA-4	477
SMA-16	1,347
Bearer	232

**Table 2**

<b>Type II POHs</b>	<b>Maximum Price (£) [1<sup>st</sup> October 2011 to 30<sup>th</sup> September 2012]</b>
64 kbit/s	120
2 Mbit/s	203
34/45 Mbit/s	1,029
140/155 Mbit/s	1,914

### Schedule 3

#### (TISBO above 45 Mbit/s up to and including 155 Mbit/s)

#### SMP services condition GH4

**Modification of condition imposed on British Telecommunications plc under the Communications Act 2003 as a result of the analysis of the market for the provision of traditional interface symmetric broadband origination with a bandwidth capacity above forty five megabits per second and up to and including one hundred and fifty five megabits per second within the United Kingdom but not including the Hull Area and the Central and East London Area**

1. The following new paragraph GH4.1(a) shall be set by inserting it after paragraph GH4.1 of Condition GH4 in Part 2 of Schedule 3 to the BCMR Notification:

**“GH4.1(a)** The Dominant Provider shall not charge more than:

- (a) for each of the Type I POH services, the maximum amount prescribed by Table 1 of Annex E for the corresponding Type I POH service during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012;
- (b) for each of the Type II POH services, the maximum amount prescribed by Table 2 of Annex E for the corresponding Type POH II service during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012;

2. Paragraph GH4.10 of Condition GH4 in Part 2 of Schedule 3 to the BCMR Notification shall be modified by inserting the following words at the beginning of that Condition:

**“GH4.10** ...Subject to paragraph GH4.10(a), [...].”

3. The following new paragraph GH4.10(a) shall be set by inserting it after paragraph GH4.10 of Condition GH4 in Part 2 of Schedule 3 to the BCMR Notification:

**“GH4.10(a)** Paragraph GH4.10 shall not apply to:

- (a) Type I POH services during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012. For the avoidance of doubt, during that period, only the prescribed maximum amounts pursuant to paragraph GH4.1(a) shall apply.
- (b) Type II POH services during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012. For the avoidance of doubt, during that period only the prescribed maximum amounts pursuant to paragraph GH4.1(b) shall apply.”

4. The following new definitions shall be set by inserting them in paragraph GH4.17 of Condition GH4 in Part 2 of Schedule 3 to the BCMR Notification:

(n) **“Type I POH services”** means the services listed in Section B8, Part 8.01, Sub-Section 1.6 of BT’s Carrier Price List:

[http://www.btwholesale.com/pages/cmsjsps/service\\_and\\_support/service\\_support\\_hub/online\\_pricing\\_hub/cpl\\_hub/cpl\\_pricing\\_hub/cpl\\_browsable\\_sections/cpl\\_browsable\\_sectionb\\_8.jsp](http://www.btwholesale.com/pages/cmsjsps/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/cpl_browsable_sections/cpl_browsable_sectionb_8.jsp)

(o) “**Type II POH services**” means the services listed in the column entitled “3rd party POH rental fixed charge p.a.” in Section 8, Part 8.03, Sub-section 1.1 of BT’s Carrier Price List:

[http://www.btwholesale.com/pages/cmsjsps/service\\_and\\_support/service\\_support\\_hub/online\\_pricing\\_hub/cpl\\_hub/cpl\\_pricing\\_hub/cpl\\_browsable\\_sections/cpl\\_browsable\\_sectionb\\_8.jsp](http://www.btwholesale.com/pages/cmsjsps/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/cpl_browsable_sections/cpl_browsable_sectionb_8.jsp)

5. Part 2(c) of Annex A shall be deleted and replaced in its entirety as follows:

**Annex A to Condition GH4**

**Products and services subject to charge control pursuant to Condition GH4.1(a)**

“... ”

**Part 2c:** Rental and maintenance services in respect of the provision of Partial Private Circuits Points of Handover in each of the following bandwidths in all parts of the United Kingdom excluding the Central and East London Area (in relation to 34/45 Mbit/s and 140/155 Mbit/s products below) and the Hull Area (for all products below) as specified in Part 1 of Annex D to this Condition.

- 64 kbit/s
- 2 Mbit/s
- 34 Mbit/s – 45 Mbit/s
- 140 Mbit/s – 155 Mbit/s
- SMA-1
- SMA-2
- SMA-16
- Bearer

...”

6. The following new Annex shall be inserted after Annex D in Part 2 of Schedule 3 to the BCMR Notification:

**Annex E to Condition GH4****Maximum Charges pursuant to paragraph GH4.1(a)****Part 1****Table 1**

<b>Type I POHs</b>	<b>Maximum Price (£) [1<sup>st</sup> October 2011 to 30<sup>th</sup> September 2012]</b>
SMA-1	402
SMA-4	477
SMA-16	1,347
Bearer	232

**Table 2**

<b>Type II POHs</b>	<b>Maximum Price (£) [1<sup>st</sup> October 2011 to 30<sup>th</sup> September 2012]</b>
64 kbit/s	120
2 Mbit/s	203
34/45 Mbit/s	1,029
140/155 Mbit/s	1,914

## Schedule 5

### (Trunk)

#### SMP services condition H4

#### **Modification of condition imposed on British Telecommunications plc under the Communications Act 2003 as a result of the analysis of the market for the provisions of wholesale trunk segments at all bandwidths within the United Kingdom**

1. The following new paragraph H4.1(a) shall be set by inserting it after paragraph H4.1 of Condition H4 in Part 2 of Schedule 5 to the BCMR Notification:

“**H4.1(a)** The Dominant Provider shall not charge more than:

- (a) for each of the Type I POH services, the maximum amount prescribed by Table 1 of Annex E for the corresponding Type I POH service during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012;
- (b) for each of the Type II POH services, the maximum amount prescribed by Table 2 of Annex E for the corresponding Type POH II service during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012;

2. Paragraph H4.10 of Condition H4 in Part 2 of Schedule 5 to the BCMR Notification shall be modified by inserting the following words at the beginning of that Condition:

“**H4.10** ...Subject to paragraph H4.10(a), [...]”

3. The following new paragraph H4.10(a) shall be set by inserting it after paragraph H4.10 of Condition H4 in Part 2 of Schedule 5 to the BCMR Notification:

“**H4.10(a)** Paragraph H4.10 shall not apply to:

- (a) Type I POH services during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012. For the avoidance of doubt, during that period, only the prescribed maximum amounts pursuant to paragraph H4.1(a) shall apply.
- (b) Type II POH services during the period beginning on 1<sup>st</sup> October 2011 and ending on 30<sup>th</sup> September 2012. For the avoidance of doubt, during that period only the prescribed maximum amounts pursuant to paragraph H4.1(b) shall apply.”

4. The following new definitions shall be set by inserting them in paragraph H4.17 of Condition H4 in Part 2 of Schedule 5 to the BCMR Notification:

(n) “**Type I POH services**” means the services listed in Section B8, Part 8.01, Sub-Section 1.6 of BT’s Carrier Price List:

[http://www.btwholesale.com/pages/cmsjsps/service\\_and\\_support/service\\_support\\_hub/online\\_pricing\\_hub/cpl\\_hub/cpl\\_pricing\\_hub/cpl\\_browsable\\_sections/cpl\\_browsable\\_sectionb\\_8.jsp](http://www.btwholesale.com/pages/cmsjsps/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/cpl_browsable_sections/cpl_browsable_sectionb_8.jsp)

(o) “**Type II POH services**” means the services listed in the column entitled “3rd party POH rental fixed charge p.a.” in Section 8, Part 8.03, Sub-section 1.1 of BT’s Carrier Price List:

[http://www.btwholesale.com/pages/cmsjsps/service\\_and\\_support/service\\_support\\_hub/online\\_pricing\\_hub/cpl\\_hub/cpl\\_pricing\\_hub/cpl\\_browsable\\_sections/cpl\\_browsable\\_sectionb\\_8.jsp](http://www.btwholesale.com/pages/cmsjsps/service_and_support/service_support_hub/online_pricing_hub/cpl_hub/cpl_pricing_hub/cpl_browsable_sections/cpl_browsable_sectionb_8.jsp)

5. Part 2(c) of Annex A shall be deleted and replaced in its entirety as follows:

**Annex A to Condition H4**

**Products and services subject to charge control pursuant to Condition H4.1(a)**

“... ”

**Part 2c:** Rental and maintenance services in respect of the provision of Partial Private Circuits Points of Handover in each of the following bandwidths in all parts of the United Kingdom excluding the Central and East London Area (in relation to 34/45 Mbit/s and 140/155 Mbit/s products below) and the Hull Area (for all products below) as specified in Part 1 of Annex D to this Condition.

- 64 kbit/s
- 2 Mbit/s
- 34 Mbit/s – 45 Mbit/s
- 140 Mbit/s – 155 Mbit/s
- SMA-1
- SMA-2
- SMA-16
- Bearer

...”

6. The following new Annex shall be inserted after Annex D in Part 2 of Schedule 5 to the BCMR Notification:

## Annex E to Condition H4

## Maximum Charges pursuant to paragraph H4.1(a)

## Part 1

Table 1

Type I POHs	Maximum Price (£) [1 <sup>st</sup> October 2011 to 30 <sup>th</sup> September 2012]
SMA-1	402
SMA-4	477
SMA-16	1,347
Bearer	232

Table 2

Type II POHs	Maximum Price (£) [1 <sup>st</sup> October 2011 to 30 <sup>th</sup> September 2012]
64 kbit/s	120
2 Mbit/s	203
34/45 Mbit/s	1,029
140/155 Mbit/s	1,914