



## BT's response to Ofcom's consultation document

*"Business Connectivity Market Review: Leased lines charge controls and dark fibre pricing"*

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**NON-CONFIDENTIAL VERSION**

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## Foreword

On 15 May 2015, Ofcom published its provisional conclusions on the Business Connectivity Market Review (the "BCMR Consultation"). Ofcom's consultation on the Leased Lines Charge Control and Dark Fibre Pricing was subsequently issued on 12 June 2015, and the supporting modelling was published on 23 June 2015 (the "LLCC Consultation"). Ofcom issued on 9 July 2015 a number of clarifications and corrections to the BCMR Consultation and the LLCC Consultation. The proposed controls are for the period from 1 April 2016 to 31 March 2019 (the "Control Period").

This submission is provided on behalf of British Telecommunications plc ("BT") in response to the LLCC Consultation.

BT Group is providing separate responses to each of the LLCC Consultation and the Cost Attribution Review ("CAR"). Each of these responses reflects the combined views of all BT lines of business.

# 1 Executive Summary

1. In our response to Ofcom's Business Connectivity Market Review ("BCMR") we set out our concern that the package of remedies Ofcom was proposing to introduce in April 2016 would be unfair and bad for the market. It would also represent a major shift in Ofcom's regulatory approach to regulating markets that are delivering good outcomes for consumers: Ofcom's proposals would create a 'perfect storm' whereby BT would face a new requirement to supply passive Dark Fibre on regulated terms alongside harsher charge controls on active services which is disproportionate and unwarranted.
2. This response focuses on the specific set of proposals set out in the separate LLCC Consultation. However, the points raised here should be read in the context of our overall responses to the BCMR consultation as well as to the further CAR which is a key driver for the proposals in the LLCC Consultation.

## 1.1 The market context for this charge control

3. It is common ground that meeting the connectivity requirements of UK businesses is critical for the UK economy. Leased lines providing dedicated transmission capacity underpin the provision of cutting edge ICT services to a range of businesses, including large multi-sited enterprises and Government organisations. The overall retail market for business connectivity services are estimated to be worth around £2bn a year (source: IDC). Leased lines are also critical to UK fixed and mobile communications providers in expanding the reach and delivery capabilities of their networks and, therefore, in supporting the overall competitiveness of a range of communications services.
4. BT has invested heavily in meeting the changing requirements from this broad range of customers for dedicated transmission capacity over the last decade – over £1.8bn of capital expenditure – facing significant risks in doing so given uncertainties around the specific nature of those requirements and customer willingness to pay for higher speeds. In 2005, leased lines based on Ethernet technology were only just beginning to be supplied with the majority of dedicated capacity being provided over analogue or digital time-division multiplex ("TDM") interfaces. Most sales were of 2Mbit/s connections based on the traditional technologies. In 2015, customers can purchase connectivity services utilising optical fibres and equipment to allow the simultaneous provision of multiple services over high capacity connections which now run at speeds well in excess of 1Gbit/s.
5. Other communications providers have also expanded their access capabilities in this period with an obvious focus on providing connectivity in business districts of major UK cities and to data centres. We consider that Ofcom has not gone far enough in reflecting the impact of this competition outside of the central London area in de-regulating wholesale access markets. While Ofcom does at least recognise that there has been extensive investment by other providers in alternative access capabilities across geographic areas, it has not taken sufficient account of the fact that draconian charge controls on BT also undermine investments by others.
6. The nature of a "leased line" has clearly transformed over the decade as a result of technological innovations and significant financial investments by BT and others. BT is now supplying a broad portfolio of access services across Contemporary Interface ("CI") – Ethernet leased lines utilising the latest investments in technology and Traditional Interface ("TI") leased lines which utilise legacy equipment which is no longer manufactured or supported. With such a broad range of options to meet evolving customer needs, the structure of pricing across the overall portfolio is critical as BT manages significant migrations between services alongside meeting the increased overall level of demand.

7. The challenges looking ahead for BT are to continue to meet evolving demand through further investments and innovations whilst, at the same time, continuing to deliver service improvements. BT faces a number of uncertainties here in ensuring it can deliver returns on the necessary investments that reflect the risks faced, including:
- customer willingness to pay for higher bandwidths and/or different technological solutions providing different capabilities;
  - the consequent ongoing pace of migration between services, particularly how and when the remaining TI customers may choose to migrate to Ethernet services, but also the scale of overall migration and connection activity that will need to be undertaken;
  - the implications this may have for ongoing support of TI services based on legacy technologies and of Ethernet service delivery; and
  - increasing competition from other suppliers which would be further facilitated if Ofcom's proposals on Dark fibre are implemented.

## **1.2 BT's concerns with Ofcom's proposals**

8. Despite this continued need for innovation and investment in addition to that seen over the last decade by BT and others and despite the risks and uncertainties BT faces, Ofcom is now proposing to impose, from April 2016, the harshest charge controls BT has ever faced in providing business connectivity services. Ofcom proposes one-off price cuts in April 2016 and further annual reductions in each year of the control which would cumulatively reduce revenue by  $\pounds 1.5$  for Ethernet leased lines and  $\pounds 1.5$  for TI leased lines. Cumulatively, we estimate this would take out  $\pounds 1.5$  in revenues. Ofcom is also proposing to introduce additional constraints on the structure of pricing within the portfolio. This is disproportionate and unwarranted, and undermines investment by BT and others.
9. Ofcom's driver for proposing to adopt such an approach may seem, on the surface, simple: that it provisionally concludes that BT's current returns are 'too high' relative to its cost of capital and would remain 'too high' at the end of the control period without sharper price reductions over the coming three years. But Ofcom's assessment of BT's returns at the start and end of the control period is flawed in a number of key respects, reflecting a number of changes in Ofcom's previously established approach. Specifically, Ofcom's proposals would:
- Change previously accepted attribution methodologies and inappropriately exclude the recovery of a significant amount of Group overheads based on Ofcom's CAR. We present evidence from FTI and EY to show why Ofcom's overall proposed approach is not appropriate.
  - Require starting charge adjustments on the basis that certain costs are recovered in current charges that are incremental to unregulated services and, therefore, not relevant to leased line services. We present evidence to show that Ofcom's proposals significantly overstate any starting charge adjustments that would be required on this basis.
  - Assume BT has scope to make significant efficiency improvements in the upcoming three year period in delivering both Ethernet and TI services. We present evidence from Deloitte to show that Ofcom's proposals effectively double-count scale and operational efficiencies.

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<sup>1</sup> We consider the loss of revenues will exceed  $\pounds 1.5$  if the risks presented by Dark Fibre cannot be mitigated.

We set out that Ofcom should introduce an efficiency target no greater than 1.5% for TI and 3.5% for Ethernet.

- Introduce an entirely new and unsupported approach to disaggregating the BT WACC which understates the forward-looking cost of capital faced by BT over the three year control period. We present evidence from FTI to challenge Ofcom's proposals.
  - Understate the costs Openreach will face in delivering Ethernet service to the levels required. We present a more complete assessment of what those costs should be.
  - Introduce a new set of assumptions about the extent to which BT could recover the costs of assets currently deployed to support TI services as volumes fall either through disposing of those assets or seeking to recover the costs from other services. We set out why those assumptions are not plausible and would lead to the significant risk of under-recovery of costs.
  - Require a sharp downturn in the prices of TI leased line services despite these being legacy services based largely on depreciated assets. This will create inefficient price signals for customers and for investors as the prices will fail to reflect the long term cost of supply. Efficient migration decisions will be deterred.
  - Understate the costs of introducing Dark Fibre and the impact that Dark Fibre will have on volumes. We present our assessment of what these costs should be.
  - Introduce unnecessary constraints on the way BT structures prices across the portfolio and develops discounts to address customer requirements.
  - Introduce unwarranted modelling changes that alone increase the X by at least a third.
10. Combining these harsh controls across Ethernet and TI with the proposal to require BT to supply Dark Fibre to competitors across SMP geographies provides clear threats to BT's ability to recover its efficiently incurred costs of supply across the three years of this control.
11. Overall and building on the specific modelling issues set out above, Ofcom's proposed approach represents a shift in approach in seeking to regulate TI and Ethernet charges in a way that fails to take full account of forward-looking market dynamics and the incentives to invest and innovate in an uncertain environment. Ofcom wants to encourage investment and innovation to meet evolving customer needs, but seeking to reduce the value BT could extract from such activity will only serve to undermine this objective.
12. This response presents evidence to support specific changes to a number of Ofcom's proposals which would produce a more appropriate regulatory framework for constraining BT's prices and meeting the needs of UK consumers.

## **2 Introduction**

13. This section of BT's response provides an overview of key items addressed in our detailed response to the consultation questions which is in section 3.
14. The approach proposed in the LLCC Consultation has a number of fundamental differences to previous LLCCs and these changes are complex in nature. Given this complexity, our current analysis is inevitably on-going and will be updated as further detail becomes available.
15. This response sets out our current analysis in the time available, taking into account as far as possible the complexity of the interactions between the BCMR, the LLCC and the CAR.

### **Related submissions**

16. BT has already provided its response to the BCMR Consultation (market analysis, Dark Fibre proposals and the general remedies being proposed with respect to Ethernet and TI services). A separate Openreach response was submitted which details our views on the proposed quality of service SMP remedies (responding in particular to section 13 of the Consultation and the associated annexes). This response covers BT's views on Ofcom's LLCC proposals. At the same time but separately BT has also submitted a response to the CAR consultation. All of these submissions are inter-related.
17. BT has also commissioned external consultancy analysis on specific aspects of the issues raised in the Consultations to provide support to a number of important arguments in this response. These will be provided to Ofcom shortly.

### **2.1 Ethernet control**

18. The responses to the LLCC Consultation questions in section 3 of this document outline in detail our views on the key issues for Ethernet (and TI for that matter), namely:
  - Dark Fibre and its impact;
  - Increased pricing restrictions and their impacts;
  - The application of starting charge adjustments; and
  - Ofcom's cost modelling.

#### **2.1.1 Dark Fibre**

19. Notwithstanding our comments in the BCMR that Dark Fibre is an inappropriate and unwarranted remedy, should Ofcom nevertheless proceed with its introduction, BT has a number of concerns, which are covered in more detail in its response to the questions below.
20. Dark Fibre volumes: Ofcom has understated the impact of Dark Fibre substitution for active services. In particular, Ofcom assumes one to one substitution of active services to Dark Fibre, rather than many to one substitution of multiple active services to a single Dark Fibre service. The evidence shows there is a large opportunity for many to one substitution and therefore the volumes of active services used in its charge control modelling are higher than they should otherwise be. We discuss this in more detail in our response to question 6.3.
21. Dark Fibre Pricing: Ofcom should take account of the following in determining the appropriate way to calculate the 'minus':

- BT has analysed Ofcom's approach to deriving the costs to be included in the 'minus' or increment and found that Ofcom excludes too many costs (the increment is  $\pounds$  too high),
- There are two significant cost factors omitted in Ofcom's considerations: the resulting stranded assets costs (our initial estimate shows a one-off  $\pounds$  cost<sup>2</sup>); and the additional costs associated with provision of Dark Fibre services, including costs of further line tests tools and increased levels of service which we outline in this response;
- The precise specification of the Dark Fibre service is unknown; Ofcom's proposals go beyond a simple unbundling of existing network elements; should costs be more than Ofcom estimates there should be a mechanism for recovering these during the control.

### 2.1.2 Pricing flexibility in the control

22. Our principal concern is that Ofcom proposes a number of additional remedies, which together drastically reduce Openreach's pricing flexibility. This is problematic because it means Openreach is less able to respond to market demand and competition, and it is less able to respond to unintended consequences of regulation.
23. Ofcom requires a total of ca.  $\pounds$ <sup>3</sup> of price reductions over 3 years for which Openreach would have discretionary control over only  $\pounds$ . Not only does Openreach have relatively less discretionary power than previously, but it will need to discharge  $\pounds$  more than the  $\pounds$  required on the previous control, on a portfolio that is significantly smaller, due to the split at 1G in the CISBO market that Ofcom is introducing.

**Table 1 – Discretionary price reductions in Ofcom's draft proposal**

	Size of the discharge over the control period
EAD 1G STD	$\pounds$
EAD STD vs LA adjustments	$\pounds$
Main Link basket reductions	$\pounds$
Discretionary reductions	$\pounds$
<b>Total (excluding overlaps from non-discretionary reductions)</b>	$\pounds$

24. Ofcom should allow Openreach the flexibility to rebalance its prices. The introduction of Dark Fibre changes the basis for competition in the market. In the circumstances, BT considers it would be a more proportionate approach to provide greater pricing flexibility in order to enable the rebalancing of active prices and thereby mitigate the adverse impacts of inefficient price arbitrage on investment and customer outcomes.

<sup>2</sup> Section 17 BT response to BCMR 31 July 2015

<sup>3</sup> In our response to the May 2015 BCMR consultation, we have estimated this to be in the  $\pounds$ , and introduced our high-level model for assessing the combined impact of the charge control and Dark Fibre, including from aggregation and price pressure on high-bandwidth price in section 17 of our response. For this part of the response, we use the lower end of this estimate as a basis for comparison.



25. In the circumstances, Ofcom's approach to the Ethernet basket control should be to:

- loosen the absolute prohibition on price increases (see our detailed analysis and comments in annex B), at the minimum through removal of caps on individual charges and consideration of total cost of ownership instead (see our detailed comments in response to questions 6.1 and 10.1),
- not impose the EAD standard to LA basis of charges obligation, which is disproportionate and flawed (see our detailed analysis in Annex C),
- include all discounted services, especially term discounted services in the basket. There is an immediately compelling justification for five year term products to count towards the basket in order to meet customer demands (see our detailed comments in response to question 5.4),
- recognise that new EAD product variants introduced in response to Dark Fibre should be afforded extra pricing flexibility e.g. on net and off net EAD prices (see our detailed comments in response to question 6.1),
- remove the main link basket, which constitutes a third layer of sub-basket with main link already included in both the Ethernet basket and the EAD 1G sub-basket (see our detailed comments in response to question 6.1).

### **2.1.3 Starting charges**

26. BT's response to the CAR sets out in detail a number of concerns about Ofcom's approach.

27. In this response we focus on our concerns about the application of the cost allocation changes to start price adjustments in the LLCC. In particular Ofcom has repeatedly underlined the central importance of consistency to provide the right incentives for private sector investment, so as to ensure that the UK is properly served by communication services. The new approach to starting charge adjustments risks being a regressive change in policy in that respect.

28. Therefore, should Ofcom none the less decide to adopt its new approach to starting charge adjustments, it is absolutely imperative that Ofcom should strictly limit its application. In particular, a starting charge adjustment, due to a cost attribution change, should only be considered where the movement was between regulated and unregulated services and crucially, even then, only where it is undeniably the case that the costs removed are incremental to the unregulated services. Furthermore, such a starting charge adjustment should be considered only for costs that were included in Ofcom's 2013 LLCC cost forecast (i.e. costs that influenced the level of starting charges), and should not be considered in respect of changes to Ofcom's cost modelling approach as this would be unfair and undermine the principle of regulatory consistency. On this basis the Ethernet starting charge adjustment should be at most -1.8% rather than -9% proposed by Ofcom.

### **2.1.4 Ofcom's cost modelling**

29. Notwithstanding the points made above, we have a number of key concerns related to estimates, cost model parameters and base costs used by Ofcom to estimate the Ethernet X and these will need to be addressed in order to achieve the correct outcome in the proposed charge controls. These include:

- Efficiency: Openreach considers Ofcom should adequately distinguish between underlying productivity gains from other cost improvements and the efficiency target for Ethernet should be no more than 3.5% rather than the 5% proposed.
- Dark Fibre implementation costs: Ofcom's modelling approach, uplifting final year costs by £30, is aimed at recovering £30 of non-capitalised one-off costs over three years but in fact results in the recovery of only £30. Furthermore, the full scale of Dark Fibre implementation costs will not be known until full product development and piloting.
- Quality of Service ("QoS") cost uplift: Ofcom has modelled the extra resource cost mostly as a one off cost; in reality it is a recurring cost. BT estimates Ofcom should increase the QoS uplift by £30 (from £30 to £60) in 2018/19 to allow BT to recover its efficiently incurred costs.
- 2013/14 TI Error correction: Whilst BT agrees with Ofcom's proposed cost adjustments for TI services, where the CTCS allocation error requires exclusion of those costs from the TI base year costs there should be an equal and opposite adjustment to the Ethernet base. To correct this Ofcom should increase the Ethernet base year costs by £18.2m.
- Access fibre elasticity: Ofcom has adopted a much lower cost elasticity (an Asset Volume Elasticity ("AVE") of 0.20 rather than the 0.80 adopted in the 2013 LLCC) without any justification. Use of this new lower AVE has a very significant impact on the X (reduces it by as much as 3%) compared with the position using the current "AVE".
- Asset price inflation: We consider that the change in Ofcom's modelling approach from real to nominal terms has caused an error in the calculation of the holding losses over the duration of the charge control which has a materially adverse impact on the X.

Ofcom must take account of these factors in reaching its final conclusions. All other things equal, these factors are likely to result in an overstatement of the X of at least 3%.

## **2.2 TI Services**

30. In our response to the LLCC Consultation questions relating to TI services in section 3.11 below, BT raises the following key issues:

### **2.2.1 The reported ROCE is inflated by life-cycle effects and does not reflect the economic value of the assets**

31. TI services have a high reported ROCE, in large part due to these services being at a late stage in the product life-cycle. This means that assets are approaching the end of their useful economic life and therefore appear as highly depreciated, with a low asset value and, in some cases, having a lower depreciation charge due to assets being fully depreciated. This means that the accounting values are not commensurate with the economic value of the assets leading to an underestimate of the true economic cost of providing TI services. DotEcon's report shows that where assets are almost fully depreciated one cannot credibly rely on ROCE figures.

### **2.2.2 Ofcom should adopt Hypothetical Ongoing Network ("HON") adjustments**

32. Ofcom rejects the use of a HON on the grounds that this would lead to the over-recovery of assets used to supply TI services.<sup>4</sup> However, Ofcom's approach prioritises short term price reductions and places less value on seeking to set prices consistent with a competitive market

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<sup>4</sup> See A5.13 of the 2015 LLCC consultation.

and is an approach that moves away from incentive regulation towards a rate of return approach. This misses the key point that services outside the TI market are affected by such an approach. By pricing TI services below the forward-looking economic costs Ofcom will cause an adverse effect – investment in, and migration to, newer technologies such as Ethernet, are adversely affected by setting TI prices too low.

### **2.2.3 Ofcom's asset disposal approach is unrealistic and essentially reallocates common costs to other services without considering if these can be recovered**

33. Ofcom has introduced a new "asset disposal" approach which states that BT should be able to dispose of its assets by removing them from the network and selling them on the secondary market.<sup>5</sup> This is impossible in the case of duct (which is not separable) and impractical in the case of fibre, where individual fibres within a cable cannot either be separated nor removed. It is only possible to remove equipment from the network if all circuits using the equipment are no longer in use. What Ofcom is suggesting is that BT undergoes a continuous network rationalisation to minimise the network equipment deployed, without considering the practicality or the cost of such an approach. In reality this would require significant network planning effort to implement, would cause service disruption to customers, and would involve the cost of reconfiguring the network and rearranging circuits.
34. Ofcom says that it might be possible for assets to be redeployed or reallocated elsewhere.<sup>6</sup> However, other TDM services using the same legacy SDH transmission technology, i.e. PSTN voice services and 20CN broadband services, are also in decline. Whilst there is some scope for the reallocation of costs between these services, this is driven by changes in relative volumes, not by changes in total volumes. Because all legacy volumes using the SDH platform are in decline, the scope for reallocation of costs is far smaller than assumed in Ofcom's model. Other shared assets, such as duct and fibre, cannot necessarily be immediately redeployed, due to network planning processes, and it is unreasonable to assume instantaneous reallocation.

### **2.2.4 Ofcom has calculated a reduction in asset values that is inconsistent with the data available**

35. As the asset disposals approach reduces the value of NRC the parameters used to make this adjustment should be consistent with the assets values being adjusted. Ofcom has used an AVE weighted by GRC rather than NRC. This places too high a weight on assets with a low NRC: GRC ratio, such as transmission equipment which happens to have high AVEs, and too low a weighting on assets such as duct and fibre which have low AVEs. The effect is an adjustment to capital employed that is too high.

### **2.2.5 Cost reduction targets, and in particular the efficiency target of 5% per annum, are unreasonable**

36. Ofcom's cost modelling implies that operating costs will fall more rapidly than volumes, causing a reduction in unit cost. This contrasts with the expectation as expressed in the Competition Commission hearing into the appeal of the 2013 LLCC that declining volumes in a market where there are significant fixed and common costs would be expected to lead to an increase in unit costs, as the fixed costs are spread across a declining service volume. In our response to question 7.4 below we demonstrate how a more realistic efficiency target would be 1.5% per annum given that the scope for efficiency savings in TI services is limited.

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<sup>5</sup> See footnote 41 to paragraph A6.41 2015 LLCC appendices.

<sup>6</sup> Reallocation of costs is also mentioned in footnote 41, *ibid*.

37. The table below sets out the impact of each item on Ofcom's final year model and the impact on X. In aggregate this shows that the charge control should, as a minimum, allow BT to increase TI prices in line with the current TI charge control.

**Table 2 - Impact of issues on the value of X**

Issue	BT proposed treatment	Impact £m on final year FAC	Impact on X
HON	Applying a HON approach to SDH costs consistent with the treatment in WBA (i.e. increasing NRC:GRC ratio to 50% and applying a 13 year depreciation life.)	✂	+3.3%
Asset disposals	Asset disposals should not apply to fixed common costs. If an AVE is applied, any averaging should be using NRC (the AVE by component is calculated using GRC weights and so is not appropriate for use in considering asset disposals.)	✂	+8.0%
Efficiency	Ofcom has not adequately justified the increase in the efficiency assumption for TI to 5%. This would mean BT does not meet benchmark efficiency levels. A 1.5% figure should be used consistently with "frontier shift" for a legacy technology.	✂	+1.5%
Disaggregated CVE	Ofcom has used an average CVE by component to forecast operating cost. Applying CVEs to each cost sector allows common cost to be properly identified.	✂	+3.5%
Cost Adjustment	The change to treatment of general overheads has not been adequately justified.	✂	+1.0%

38. Under Ofcom's proposals, TI prices will no longer see a widening differential with Ethernet prices, and this will reduce incentives for efficient migration. As a consequence, it would be expected that migration away from TI services will slow and customers will continue to use TI services for longer than they would otherwise have done.
39. The proposals focus too much on looking to achieve short term price cuts to customers of TI services at the expense of longer term dynamic efficiencies in the delivery of business connectivity services and in ensuring efficient migration between legacy TI services and more modern alternatives. This will lead to higher costs in the long term for the industry as life of TI services is artificially prolonged. The impact on migration incentives and the longer term effect on economic efficiency is addressed in the Plum Report at Annex K.

### 3 Answers to the Ofcom questions – LLCC 2016

40. This section provides BT's responses to the questions raised in the LLCC Consultation.

#### 3.1 Form and duration of the charge control

***Question 3.1: Do you agree with our proposal to use an Inflation-X form of charge control? If not, what alternative would you propose and why?***

41. Ofcom proposes the Inflation-X form of charge control for the leased lines services, on the basis that it has been tried and tested over many years for telecoms charge controls and is the same form of control Ofcom adopted for the current charge control (3.4 of the June 2015 LLCC Consultation).
42. Ofcom prefers an inflation indexed control over the alternatives of 'cost-plus' or 'retail minus' regulation on the basis of its incentive properties, including incentivising BT to make efficiency improvements, efficiency gains over and above those forecast as part of the control and efficient investment (3.5-3.7 of the June 2015 LLCC Consultation).
43. BT agrees with Ofcom's choice of the Inflation-X form of charge control for the leased lines services in question. However, we have concerns with the way Ofcom proposes to implement this form of control.
44. Ofcom proposes to set an efficiency target for cost reductions based primarily on what Openreach has challenged itself to deliver (or has achieved in the past). This reduces BT's incentives to set itself another round of challenging targets because any record of achievement and / or plans to reduce costs will be held as evidence justifying further price cuts. Incentive regulation of this type should provide BT with a fair prospect of out-performing reasonable targets for cost minimisation, and - by meeting more exacting targets - earning for its shareholders a rate of return above its cost of capital.
45. Moreover, BT considers the proposals to introduce starting charge adjustments further undermines the incentive properties of an inflation index control. We comment further on this in our response to Questions 6.1 and 6.3 below.

***Question 3.2: Do you agree with the use of CPI as the relevant benchmark for inflation? If not, what alternative would you propose and why?***

46. BT agrees with Ofcom's provisional conclusion that on balance it would be more appropriate to use the CPI to index the main leased lines charge controls (3.20 of the June 2015 LLCC Consultation).
47. BT agrees with Ofcom that the key role of the inflation index in the charge control formula is to protect the regulated firm and customers from forecast error (3.17 of the June 2015 LLCC).
48. Given that the RPI is generally higher than the CPI, setting the same nominal target for regulated prices will imply a lower X where the CPI is used in the price control formula. For example, were nominal prices to be required to fall by 2%, CPI expected to be 2.3%, and RPI 3.3%, over the control period, then X would be 4.20% under a CPI control and 5.13% under an RPI control. Different values of X are required under different indices to give the same nominal target.
49. There are 2 stages in Ofcom's modelling approach where the index is used:

- 'Stage 1': assessing the appropriate nominal cost of inputs; and
  - 'Stage 2': calibrating the X for transferring the nominal charges from the model into a CPI-X formula.
50. Ofcom has a view of general inflationary pressure assumed in Stage 1, and a forecast of CPI and RPI in Stage 2. It is vital that, under the use of either CPI or RPI, the assumed level of general inflationary pressure used in 'Stage 1' is the same or close to that used in 'Stage 2'. Otherwise, it would be building into its process the very same kind of forecast error that the RPI-X or CPI-X formula is designed to avoid. Assuming this is the case, BT does not object to using CPI.

***Question 3.3: Do you agree with our proposal for the duration of the charge controls to be three years? If not, what alternative would you propose and why?***

51. Ofcom provisionally concludes that "a charge control period of three years strikes an appropriate balance between forecast uncertainty and providing regulatory stability for stakeholders. It also aligns with the forward looking period for the market review." (3.31 of the June 2015 LLCC Consultation).
52. BT prefers market reviews, and the period for any resulting charge controls, to be set for a longer period than three years, to encourage stability and investment. This is because the incentive effects of an RPI-X (or CPI-X) control are best realised by a longer charge control period.
53. BT accepts, however, that Ofcom's proposals for a three year duration is consistent with the EU Common Regulatory Framework (CRF).<sup>7</sup>
54. In the event that there is a delay in Ofcom reaching its conclusions, BT would expect Ofcom to re-consult should it propose any change to the duration of the control.

## **3.2 Proposed Framework**

***Question 4.1: Do you agree with our proposed five stage framework setting out the key economic principles that we propose to take into account in designing our proposed charge controls? If not, what alternative would you propose and why?***

55. The proposed approach outlined by Ofcom is largely the same as in previous charge controls except the significant change it proposes to stage 4 (consider whether to make starting charge adjustments) of its five stage framework. BT's position is that a starting charge adjustment related to changes in the way costs have been attributed would only be justified if costs which had been included as strictly incremental to leased line services in setting the last charge control have now been identified – whether by BT itself or by Ofcom in the CAR – as incremental to unregulated services. Furthermore, even when such strictly incremental costs are identified and given Ofcom's historic and established approach both to the attribution of general overheads (see BT's response to the CAR consultation) and to the use of glide paths, and the risk of unintended consequences, we would expect Ofcom to assess each of the relevant changes to the cost attribution methodology against a set of criteria which took into

<sup>7</sup> The CRF consists of a number of Directives, the most relevant of which are Directive 2002/21/EC on the common regulatory framework for electronic communications networks and services (the Framework Directive, as amended) and Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities (the Access Directive, as amended).

account the possible competitive and investment effects that a starting charge adjustment might have before imposing such an adjustment.

#### **Stage 4: Consider whether to make starting charge adjustments**

56. At paragraphs 4.71 to 4.117, Ofcom sets out the analytical framework within which it will consider whether any starting charge adjustments should be made in setting leased line charge controls from April 2016.

57. Ofcom explains that its “general preference is for glide paths”, noting the balance this strikes between (i) providing stronger incentives for productive and dynamic efficiency improvements; and (ii) reducing short term allocative efficiency by allowing prices to diverge from costs for longer. Ofcom states that:

*“Historically, we have typically attached higher weight to productive and dynamic efficiency considerations for wholesale leased lines, rather than trying to achieve allocative efficiency at every point in time. This is because productive and dynamic efficiency improvements are likely to generate greater benefit to consumers over time; as the firm becomes more efficient and increases investment and innovation, this should ultimately result in lower prices and better services for consumers.” (para 4.77)*

58. BT agrees with this general approach and the rationale for preferring glide paths. At its centre, this approach captures the well-documented, underlying rationale for the “RPI-X” charge control regime: i.e. the longer term, dynamic benefits it provides over “rate of return” price regulation through the incentives on the regulated firm to drive efficiency improvements and to invest in innovation to develop the regulated product set.

59. Ofcom then considers the circumstances under which it might depart from the generally preferred approach: i.e. circumstances where “the balance of efficiency considerations implies that some one-off starting charge adjustments are appropriate.” (para 4.78)

60. Two broad types of circumstances are identified:

- “Where the risks to economic efficiency or competition from distorted pricing signals are particularly significant, and therefore outweigh the benefits of a glide path approach.” (para 4.79, emphasis added). The distortion here relates to concerns that as prices diverge from underlying costs of supply, both consumer purchasing and supplier investment decisions will be affected – i.e. it is an articulation of the allocative efficiency impact of prices being above or below cost at any point in time. Put simply, Ofcom is noting that the bigger the magnitude of the gap between price and cost, the bigger the allocative efficiency impact and the greater the risk that this might outweigh the accepted productive and dynamic efficiency benefits of the glide path approach.
- “Where prices are significantly above or below cost for reasons other than efficiency or volume growth.” (para 4.79) While there is also some reference here to the magnitude of any gap that may arise between price and cost, the focus here is more on the reasons that such a gap exists.

61. Reflecting this focus on the magnitude of any observed gap between charges and costs and the reasons for any such gap, Ofcom goes on to propose to apply the following principles in considering the need for starting charge adjustments in relation to Ethernet and TI services (paragraph 4.116):

- **Distorted pricing signals** – i.e. addressing concerns that may arise if the magnitude of the gap were significant: if (comparing BT's aggregate service charges to their costs using 2016/17 forecast data) charges are significantly above DSAC (or possibly FAC) or below DLRIC Ofcom proposes to consider a starting charge adjustment;
  - **Efficiency and volume changes**: if excessively high or low margins are observed, but have been driven by efficiency and volume changes since the last control was set, they should always be incorporated only in the price glide path under the new control;
  - **Changes in Ofcom modelling approach**: if excessively high or low margins are observed, but are driven by changes in the way costs have been modelled since the last control was set, then they should always be incorporated only in the price glide path under the new control;
  - **Cost attribution changes between regulated markets**: if excessively high or low margins are observed, but are driven by the correction of accounting errors or changes in cost allocations which move costs between regulated markets, then they should always be incorporated only in the price glide path; and
  - **Cost attribution changes between regulated and unregulated markets**: if excessively high or low margins are driven by the identification of accounting errors or changes in cost allocations (specifically relating to allocation of incremental, not common costs) which move costs between regulated and unregulated markets, Ofcom proposes to impose a starting charge adjustment.
62. The first four principles listed above support the use of glide paths except where prices at the start of the control are considered to be above DSAC (or below DLRIC) and are therefore consistent with the approach that Ofcom has consistently applied in previous market reviews when determining how it would introduce a price control. Reflecting much of the framework set out in the LLCC Consultation:
- Ofcom has previously stated a preference for avoiding “price shocks” by immediate price changes instead of a gradual adjustment of prices using the glide path mechanism. This is because the use of the glide path “... *leads to a more stable and predictable background against which investments and other decisions may be taken by market players. This is particularly important for telecoms as there are now many suppliers besides BT*”.<sup>8</sup>
  - Ofcom has previously (and repeatedly) noted that “where BT is subject to repeated charge controls, if at the end of each control we automatically adjusted prices to costs then this could dampen BT’s incentives to make cost savings through time”<sup>9</sup> and “there would be little incentive to efficiency towards the end of a control period”.<sup>10</sup>
  - Ofcom considered that where prices were above DSAC, it would consider prices to be sufficiently high “so as to run a high risk of causing distortions”<sup>11</sup> (in particular inefficient entry to the market) and thus require a starting charge adjustment.

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<sup>8</sup> See e.g. paragraph 3.227 of the Leased Lines Charge Control Statement 2009.

<sup>9</sup> See e.g. paragraph 5.88 of the Leased Lines Charge Control Statement 2009.

<sup>10</sup> See e.g. paragraph 3.231 of the Leased Lines Charge Control Statement 2009.

<sup>11</sup> See e.g. paragraph 5.90 of the Leased Lines Charge Control Statement 2009.



- Ofcom has consistently used DSAC as the benchmark for considering whether initial starting charges were too high.
63. Our concerns arise with the approach Ofcom is adopting in relation to the final principle i.e. that it is proposing starting charge adjustments where it identifies that the gap between prices and costs is, at least in part, either:
- driven by the correction of errors in the way costs were calculated and reported, identified since the last charge control was set, which have the effect of moving costs between regulated and unregulated services; or
  - driven by changes in the methodologies used to allocate costs between regulated and unregulated services such that costs that had previously been allocated to regulated services in setting previous charge controls were now identified as incremental to unregulated services.
64. For the purposes of both the Ethernet and TI charge controls, as no charges have been found to be significantly above DSAC, Ofcom proposes to make starting charge adjustments only on the basis of the last principle.
65. This principle is a new one introduced by Ofcom for the purpose of securing starting charge adjustments in this charge control. This change of approach introduces a significant shift from Ofcom's previous emphasis on productive and dynamic efficiency towards allocative efficiency and expands the opportunity for Ofcom to affect one off price shocks in the market contrary to the principle of regulatory consistency. While BT agrees that changes of this nature might give rise to distortions<sup>12</sup> and therefore there may be a case for making starting charge adjustments, we do not agree that this necessarily generally follows.
66. BT's position is that starting charge adjustments should only be applied where there is clear evidence that costs that are truly incremental to unregulated services have been previously, erroneously, allocated to leased lines services. Ofcom should not require starting charge adjustments simply where a different approach to attributing common costs is proposed. While at various points in the LLCC Consultation (e.g. paragraphs 4.105 and 6.124), Ofcom appears to broadly accept this condition, BT is concerned that, in formulating its proposals, Ofcom has actually drawn a very loose distinction between the categorisation of costs as 'incremental' or 'common'.
67. This means that it is not clear that the distinction Ofcom makes between the evolving nature of its modelling approaches and changes to the treatment of direct allocation of costs is as stark as Ofcom suggests. Ofcom indicates at paragraphs 4.114 and 4.115:
- 4.114 "...the models that Ofcom uses to set charge controls can be changed over time to reflect better evidence or improved methods of forecasting."
  - 4.115 "We do not propose to make a starting charge adjustment for such changes to our modelling approach. When setting charge controls, our modelling approach is consulted on and uses the best information and judgement available at the time. However, it is also appropriate to refine and review our modelling approach over time and between market reviews where we consider it will improve the accuracy of our models and forecasts. If we were to make starting charge adjustments based on changes to our modelling approach,

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<sup>12</sup> See paragraph 4.112 of the LLCC Consultation.

this could significantly undermine the stability and predictability of the regulatory regime as there would be significant uncertainty around prices that are charge controlled.”

68. Similarly, BT's cost attribution can be changed over time to reflect better evidence or a more disaggregated approach to cost categories thereby enabling the identification of cost drivers which are considered more appropriate. This does not, however, imply that previous attributions should be considered to be 'wrong' and/or result in economic efficiency distortions. This is particularly true when it is noted that the way in which costs which are fixed and common across services are recovered across those services will itself give rise to complex economic efficiency considerations. One particular attribution method will not clearly be more economically efficient than another and so seeking to 'correct a distortion' based on prices being above costs based on a particular attribution of common costs would not clearly be justified.
69. By way of example, Ofcom's approach to general overheads in the CAR Consultation reflects a move by Ofcom to review and refine its approach to cost attribution where it believes this will improve its accuracy. The existing cost attribution method used by BT considers general overheads at quite an aggregated level, which necessarily involves less precision; an approach which was actively accepted and supported by Ofcom in the past.<sup>13</sup> Ofcom now wishes to refine its approach by analysing this cost category at a more granular level, which in some cases permits a more specific cost driver to be identified. Putting aside the appropriateness of the drivers identified by Ofcom (which are considered in our response to the CAR Consultation), BT considers this should not of itself justify a starting charge adjustment any more than any other change in the modelling approach would. The application of a starting charge adjustment in these circumstances will be damaging, risking undermining a well-established precedent and consequently impacting regulatory stability and predictability with harmful effects on investment incentives.
70. If Ofcom adopts an inappropriately severe approach, and as a result sets regulated prices below the truly economically efficient level, the effect of this would be the chilling of investment incentives and potentially inefficient market exit. In this regard, we consider there to be greater risk from a starting charge adjustment approach than from a gradual glide path based approach to price changes.
71. Ofcom also states<sup>14</sup> that making starting charge adjustments sends the most appropriate signals to BT because, if a glide path was used to take cost allocation changes into account it would give BT an incentive to continue making inappropriate cost attributions going forward. BT considers this does not fully reflect the potential for unintended consequences of Ofcom's proposed approach given the magnitude of the proposed adjustments and we reject the inference of deliberately making inappropriate cost attributions in any case.
72. The use of market intervention is an inherently difficult task, and inappropriate regulation or applications of it can have serious negative unintended consequences, particularly in markets which are dynamic in nature. BT considers it imperative that Ofcom properly assesses the impact that making starting charge adjustments will have, not just on regulated markets but on the competitive and investment effects that are impacted in unregulated markets. This is particularly relevant given Ofcom's Strategic Review of Digital Communications' (the 'DCR') objective to ensure that incentives for efficient private sector investment and innovation are maintained and strengthened, in order to ensure widespread availability and high quality of services, this relates to both regulated and unregulated services. As a result, the proposed

<sup>13</sup> Competition Commission, Determination, Carphone Warehouse Group plc v Ofcom (Case 1111/3/3/09).

<sup>14</sup> Paragraph 4.111 of the LLCC Consultation.

starting charge adjustments appear misaligned with Ofcom's key DCR objective, due to their likely negative effect on investment incentives.

73. By taking its proposed approach, Ofcom would fail properly to perform its statutory duties with the necessary regard to the regulatory principles of proportionality and consistency and the desirability of encouraging investment and innovation. Given its historic and established approach both to the attribution of general overheads (see BT's response to the CAR consultation) and to the use of glide paths, the burden on Ofcom as an evidence-based regulator to demonstrate that such a significant change is necessary, appropriate and proportionate is particularly high. Ofcom has singularly failed to do this, poorly signalling a significant change of policy that is likely to introduce unwarranted asymmetric risks and to adversely impact investment incentives. We would expect Ofcom to assess each of the changes to the cost attribution methodology against a set of criteria which took into account the possible competitive and investment effects a starting charge adjustment would have.
74. In these circumstances, any starting charge adjustment under the new control should be based on identifying the scale of those costs 'allowed for' under the previous charge control.

### **3.3 Proposed approach that applies to both Ethernet and TI services**

***Question 5.1: Do you agree with our proposal to adopt broad baskets for leased lines services, but separate TI and Ethernet baskets? If not what alternative would you propose and why?***

75. BT agrees with the proposed separate baskets for TI and Ethernet baskets (if Ofcom decides that it is necessary to have a charge control for TI services) for the reasons given in the LLCC Consultation paragraph (5.6), namely the competitive conditions and market trends between TI and Ethernet are so dissimilar that a single basket would not make sense. BT agrees with the proposal to adopt broad baskets for both Ethernet and TI.
76. In relation to Ethernet services, BT also agrees with Ofcom that there is currently no clear evidence to indicate that BT charges excessive prices for products that are less competitive, and that this is therefore not an issue that militates in favour of narrower baskets.
77. Regarding products consumed more on a proportionate basis by external CPs than by internal CPs (5.17), Ofcom maintains that such an issue arises in relations to Local Access variants and Standard variants of EAD. Ofcom's conclusion is that a basis of charges obligation between EAD Local Access and EAD standard circuits would address its concerns. BT disagrees this is the case. Ofcom's key rationale for introducing the remedy is to mitigate the risk that internal CPs would be advantaged to the detriment of external CPs in how EAD standard and EAD LA circuits are priced relative to one another. The available evidence suggests there is very limited scope for significant discrimination in favour of internal CPs. The propensity for both external and internal CPs to use EAD LA circuits as opposed to EAD standard is converging, with all CPs increasingly consuming EAD LA circuits. For these reasons, BT considers there is no issue to be addressed either by means of basket decision or by means of basis of charges remedy. Moreover the remedy is disproportionate and inappropriate as the issue it is designed to address is fallacious and its introduction undermines Ofcom's CPI-X charge control approach, and creates undue complexities in its implementation.
78. BT lays out further comments with regard to this issue in response to question 6.1 and Annex C where we explain why this remedy is not objectively justifiable and is disproportionate in relation to what it is intended to achieve. Notwithstanding this, should Ofcom impose such a basis of charges control, it would then make sense to exclude EAD LA products from the EAD 1Gbit/s basket. We discuss this in more detail in response to question 6.1.

79. In relation to TI services BT considers that it would be more efficient to allow flexibility to operate charges without the proposed sub-caps which are unnecessary as BT is already constrained by the need to meet the charge control basket overall. This adds extra cost and complexity to charge control compliance without any obvious benefit.

***Question 5.2: Do you agree with our approach to deriving our base year costs for Ethernet and TI services, including***

- a. our proposal to forecast costs based on BT's costs of providing business connectivity services;***  
***b. our proposal to apply CCA FAC as our cost standard; and***  
***c. our proposal that the base year for the 2015 LLCC Model is the financial year 2013/14 and that our base year for the model for the 2016 BCMR Statement should be the financial year 2014/15?***

***If not, what alternative would you propose and why?***

**Forecast costs**

80. BT agrees that BT's costs should be used as the base for Ofcom's forecast cost subject to suitable adjustments.

**Costs standard**

81. Two factors are relevant with the cost standard to be adopted:
- to ensure that prices are set at the level that allows other efficient operators to compete effectively with BT; and
  - to ensure that competition between technologies is possible (in other words that the charges should be "technology neutral").

This would usually favour basing the charge control on BT's incurred costs using Current Cost Accounting Fully Allocated Cost (CCA FAC) – as is the case with Ethernet services here. BT agrees with Ofcom that it is appropriate for relevant sunk costs to be included in the cost base.

82. BT's CCA FAC values for the legacy TI services are lower than the costs that a hypothetical market entrant might face because some assets are fully depreciated (or close to being fully depreciated). This has occurred because some elements of the legacy platform have lasted longer than envisaged at the time the investment was made. This means BT's CCA should be used but adequately adjusted to represent a "hypothetical ongoing network". We outline our views on this in more detail in the response to question 7.5.
83. BT agrees with Ofcom that the pattern of recovery of fixed common costs should be consistent across different charge controls, and that it is important that the level of common costs recovered from the modelled services should be the same throughout the control, adjusted only for efficiency and inflation (as explained in paragraph 4.56 of the LLCC Consultation).

## Base year

84. BT agrees that Ofcom should use 2014/15 costs for the Final Statement as this will be the most up to date cost information available at that time.

**Question 5.3: Question 5.3: Do you agree with our approach to forecasting costs and revenues over the period of the charge controls for Ethernet and TI services, including:**

- a. our AVEs and CVEs assumptions;**
- b. our input price inflation assumptions; and**
- c. our WACC assumptions?**

**If not, what alternative would you propose and why?**

85. In this section we respond to each of Ofcom's forecasting assumptions in turn.

## Asset Volume Elasticity ("AVE") and Cost Volume Elasticity ("CVE") assumptions

86. BT agrees in principle on the use of AVEs and CVEs but Ofcom should recognise that this modelling approach works best for "steady state" type considerations, i.e. where volume changes are not dramatic such that the straight line approximation of the cost curve (i.e. the LRIC/FAC ratio) is appropriate. When volume changes are large, this approach does not capture step changes in the costs, for example large upfront investments or large cost capital write-downs. This may be problematic especially as the controls are set every three years, and the cost profiles are assessed every year rather than over a long time period. Below we highlight two specific areas of concern.
87. BT considers that both of these factors, for TI that costs are 'sticky downwards' and, for Ethernet, the fibre access AVE is lower than expected. This results in an inappropriate level of forecast costs and thereby an unreasonably inflated X.
88. More generally, there is a link between the use of AVEs / CVEs and the level of expected efficiencies, i.e. scale economies come through when  $AVEs < 1$  and  $CVEs < 1$  and Ofcom needs to account for the risk that an inappropriately set efficiency target will result in the efficiency factor inadvertently including scale effects, essentially double counting the efficiencies that might be achieved.

## TI – Costs sticky downwards

89. BT is concerned that the AVEs and CVEs have been derived from BT's Long Run Incremental Cost (LRIC) model, which takes a long term view of costs and assumes that the network can be rearranged so as to optimise the costs incurred. In practice, the time horizon of the charge control is relatively short and not all costs can be avoided as volumes are reduced. For example BT has an installed base of legacy Time Division Multiplexed ("TDM") equipment of which footprint is determined by the historical volume of TDM services deployed. Ofcom's model assumes, in adopting the LRIC CVE and AVE, that the network can be costlessly re-configured. This is not realistic for the legacy network where equipment can only be removed when the final circuit running over the equipment is ceased. Reconfiguration of the network is costly, causes service disruption to customers, and is only economic to do periodically through network rationalisation programmes.
90. This is particularly an issue when volumes are falling and cost needs to be removed in contrast to when volumes are increasing and cost needs to be incurred as a result of rising volumes. This has been described in economic terms as costs are "sticky downwards".

### Ethernet - Access Fibre AVE

91. Ofcom lays out in Annex 8 of the LLCC Consultation its analysis of cost elasticities. Ofcom indicates that the purpose of the AVE is to “*appropriately reflect the underlying (sometimes complex) relationship between forecast changes in volumes and assets/costs*” given the existence of fixed and common costs that “*....may not change by exactly the same proportion as volumes*” (A8.96). With regard to Ethernet services we consider Ofcom has not estimated an appropriate Asset Volume Elasticity (AVE) value for Wholesale & LAN extension services fibre (“Access Fibre”) as it does not appropriately reflect the underlying relationship between forecast changes in the volumes and costs of Access Fibre.
92. The Access Fibre AVE of 0.20 proposed by Ofcom (Figure A8.30) results in a systematically understated forecast of these costs because volume growth leading to footprint expansion has relatively low fixed common costs.
93. Rather than use an AVE of 0.20 Ofcom should instead use an AVE of 0.8, as it did in the 2013 LLCC. Adopting an AVE of 0.20 is a radical departure from Ofcom's previous approach, which is not properly explained or justified in the LLCC Consultation. BT's view, which is set out in more detail below, is that the underlying factors that led Ofcom to adopt an AVE of 0.8 in the current control (rather than the LRIC to FAC ratio of 0.13) have not changed and that, absent any further justification from Ofcom, the AVE should remain 0.80.
94. Should Ofcom proceed with its proposal to set the AVE for Access Fibre at 0.20 rather than 0.80, this will have a significant effect on forecast costs and have the effect of overstating the X by ~3%, and BT should therefore be given an opportunity to respond properly to a full detailed reasoning and justification for this change in approach by Ofcom.

### Underlying factors justifying the adoption of an AVE of 0.80

95. In section 20 of its 2013 LLCC Final Statement Ofcom laid out its reasoning for departing from the LRIC to FAC ratio for the AVE. Essentially, Ofcom considered that although the method of using the ratio of LRIC to total cost should usually be reasonable, Ofcom believed Access Fibre to be an exception to the norm because the expansion of the fibre services requires BT in many cases to expand the fibre footprint of its network; as the network is likely to be geographically dispersed, this produces fewer opportunities for economies of scale and density. These characteristics hold as true today as they did in 2013. Extracts of the relevant sections from the LLCC 2013 Final Statement where Ofcom discusses its decision to adopt an AVE of 0.80 for Access Fibre are set out below:

*“20.363 We have carefully considered BT's point that the Access Fibre AVE calculated using the BT LRIC model is too low. We understand that the LRIC model calculates the cost volume relationships (CVRs) from which AVEs are derived using a decremented approach. This assesses the amount of costs saved if BT no longer had the volume of services associated with that product in a given year. This gives a calculation of the incremental costs associated with a service as a share of total costs.*

*20.364 This methodology appears suitable for most of the asset types we consider. For most of the asset costs the network has largely been built and volume changes are a result of an existing network being used more (or less) intensively. As discussed in Section 19, the average relationship between LRIC and total cost should be a reasonable approximation of the incremental costs of serving an additional customer.*

*20.365 We believe that the Access Fibre CVR is likely to be different to those of the other asset types we model. For asset types such as Local Exchange, Duct and Main Exchanges, we would expect that a significant proportion of an increase in circuit volumes will be served*

*by the existing network infrastructure – as circuit volume increases, the assets will be used more intensively. As a result, we consider that it is appropriate to use BT's LRIC model to estimate AVEs for these asset types.*

*20.366 Access Fibre, on the other hand, is likely to possess fewer opportunities for such economies of scale and density. The expansion of fibre services requires BT in many cases to expand the fibre footprint of its network, rather than serving more customers using the existing assets. This expansion of the network is likely to be geographically dispersed, producing fewer opportunities for economies of scale and density than if the expansion was concentrated in a given geographic area. On each occasion that BT has to install new fibre when connecting a customer, BT will need to make capital expenditure (i.e. BT cannot use the existing fibres more intensively)."*

And then Ofcom concludes:

*"20.374 In our model we have adopted an AVE of 0.8 for access fibre. This is consistent with the calculations for historical CVRs for circuits and as well as components in two of the three years for which we have historical information. We note however, that the value of X would be unchanged if we were to have an AVE based on the three year historical average for components of [□]. In reaching this decision we have noted that the choice of access fibre AVE has a small impact on the value of X because the increase in component volumes is forecast to be relatively modest."*

### **Input price inflation assumptions**

96. Ofcom proposes the following input price changes, set out in detail in Annex 8:

- Duct and copper assets: valued on RAV basis
- Other assets: flat nominal asset prices
- Pay inflation of 2.5%
- Non-pay inflation of 2.6%

We now discuss these in turn.

### **Asset price changes**

97. Ofcom's assumption on duct and copper asset price change is based on its approach to RAV, i.e. valued at RPI inflation. We agree with this approach. For the other assets, Ofcom has assumed that there is zero nominal price change, consistent with the 2013 BCMR Statement where these assets were said to be valued at "*historic cost... and were therefore... consistent with the accounting treatment of these assets*".<sup>15</sup> This is the reason for Ofcom's observation in this LLCC Consultation that "*there was virtually no increase in value for the five years ended 31 March 2014*".<sup>16</sup> for these assets.

Calculation of real holding (gains)/losses

98. In Ofcom's cost model, the average asset price change applied to each of the components is calculated as the average price change across all cost categories, weighted by their respective net replacement cost values. Due to the weight of duct and copper in the majority of these

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<sup>15</sup> Paragraph A12.135, Ofcom, BCMR Statement, 2013.

<sup>16</sup> Paragraph A8.288, Ofcom, BCMR: Leased lines charge controls and dark fibre pricing Consultation, 2015.

components, the impact of this is to have small nominal asset price increase over the forecast period.

99. The asset price changes are used to calculate holding gains or losses that are added to the cost stack, reflecting the concept of Financial Capital Maintenance ("FCM"). With an assumption of zero nominal asset price change on assets other than duct and copper, this would imply zero nominal holding gains, and it means for these assets that *"their values reduced in real terms over the duration of the charge control"*<sup>17</sup>.
100. We consider that the change in Ofcom's modelling approach from real to nominal terms may have caused an error in the calculation of the holding losses over the duration of the charge control. This is because Ofcom calculated nominal holding (gains)/losses as

$$\text{Nominal HGL}(t) = - \text{nominal NRC}(t) * \text{IPC}(t)^{18}$$

$$\text{Real HGL}(t) = \text{Nominal HGL}(t) / (1 + \text{CPI}(t))$$

101. This means that with a zero nominal holding gain, the division of  $(1 + \text{CPI})$  means that there would be a zero real holding gain as well. The alternative approach is to either apply real asset price inflation to real net replacement cost to arrive directly at real holding (gain)/loss estimates, or adapt the nominal holding (gain)/loss equation as follows:

$$\text{Nominal HGL}(t) = \text{nominal NRC}(t) * - [\text{IPC}(t)]$$

$$\text{Real HGL}(t) = \{ \text{nominal NRC}(t) * - [\text{IPC}(t) - \text{CPI}(t)] \} / (1 + \text{CPI}(t))$$

$$= \{ \text{nominal NRC}(t) / (1 + \text{CPI}(t)) \} * - [\text{IPC}(t) - \text{CPI}(t)]$$

$$= \text{real NRC}(t) * - [\text{IPC}(t) - \text{CPI}(t)]$$

$$\approx \text{real NRC}(t) * - \text{real IPC}(t)$$

$$\text{Since } \text{IPC}(t) - \text{CPI}(t) \approx (1 + \text{IPC}(t)) / (1 + \text{CPI}(t)) - 1$$

102. We consider this has a material impact on the proposed Xs', since CPI inflation is higher than the majority of the nominal asset price changes applied to each cost component, and therefore there should be a real holding loss added to the cost stack and not the real holding gains removed from the cost stack that Ofcom has calculated.

#### Capex efficiency and asset price changes

103. Ofcom applies a 5% efficiency on both steady state and additional capex in its model. We consider that this double-counts the scale of efficiency improvements expected. With a small nominal asset price increase and a CPI assumption of 1.9%,<sup>19</sup> this means that there is between 0% and 1.9% real asset price reduction in the valuation of the assets used to support both TI and Ethernet services. We consider this is an unrealistic assumption.
104. For example, Ethernet electronics has an AVE of 0.96<sup>20</sup> and is used by WES and EAD services. If these volumes increase by, say 10%, then the additional electronics equipment

<sup>17</sup> Paragraph A12.135, Ofcom, BCMR Statement, 2013.

<sup>18</sup> Table A6.3, Ofcom, BCMR: Leased lines charge controls and dark fibre pricing Consultation, 2015.

<sup>19</sup> A6.72, Ofcom, BCMR: Leased lines charge controls and dark fibre pricing Consultation, 2015.

<sup>20</sup> Table A8.30, Ofcom, BCMR: Leased lines charge controls and dark fibre pricing Consultation, 2015.



required is 9.6%. The cost of this new equipment that BT is allowed to recover, however, is reduced to only 8.9%, i.e. after taking into account 5% capex efficiency plus an asset price reduction of 1.9%. Since this is to do with the underlying capital equipment, whilst BT's engineers may be able to install this equipment or resolve faults more quickly, these effects are captured in operating costs, where there is also a 5% efficiency assumption. Instead, capex efficiency can be interpreted as either capital deepening or technological change. It is unclear as to how efficiency can be achieved with physical underlying assets. That is, electronics are required for individual circuits; there is little scope for using this equipment "better" across different circuits. On the other hand, the asset price change assumption can be interpreted as being able to purchase the equipment more cheaply, or purchasing better equipment at the same or lower price (i.e. reflecting the concept of Modern Equivalent Asset).

105. We do not find relevance in Ofcom's discussion of the inflation assumption from the PVEO analysis. As we state elsewhere, the PVEO analysis is carried out by the lines of business, and does not identify individual products, let alone the underlying components used to deliver these services. Moreover, each service uses different components, which are in turn made up of different assets. Some may contain duct and fibre, whilst others are just equipment. Furthermore, the "P" in the PVEO analysis includes inflation, but also includes other price changes, such as those resulting from regulatory decisions. As such, we do not think a comparison between the inflation assumption in this section and the price assumption in the PVEO analysis is relevant. We do consider, however, that in applying the 5% capex efficiency and a 1.9% real asset price reduction, Ofcom is double-counting the reasonable level of efficiency BT should deliver over the charge control period.
106. We consider the application of real asset price reductions in Ofcom's model mean that its capex efficiency assumption is overstated and is not reflective of even an efficient operator. We suggest maintaining the asset price change assumption (though with the change to the holding (gain)/loss calculation), but removing the capex efficiency assumption altogether.

#### Pay inflation

107. Ofcom has used a number of sources to arrive at the assumption of 2.5% nominal pay inflation assumption, but places less weight on BT's management information (PVEO) "*because to do so may create perverse incentives for BT's negotiations with the unions in the future*"<sup>21</sup>. It is inconsistent that Ofcom considers the impact of incentives when using internal management information for setting targets, whereas for efficiency it is the primary source of evidence.
108. Ofcom considers both historic and forecast economy-wide pay indices, where the historic pay trend from 2009 to 2014 has been around 1.4%, and the forecast to 2017 is around 3.1%. Ofcom selects a range of 2% to 3% for the pay assumption that is consistent with the PVEO analysis and BT's pay agreements with trade unions.
109. We do not consider that there is much relevance in looking at the historic pay trends, given that new negotiations may not be dependent on what has happened in the past, but may be more linked to the expected future performance of the company. The evidence on forecast weekly earnings in Figure A8.41 shows that as the economy recovers, there will be an expectation that wages rise, and this will be taken into account in future pay negotiations. The forecasts are also consistent with those published by the Office of Budget Responsibility ("OBR"). They show that over the charge control period, average pay is expected to rise at a rate of over 4% per annum.

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<sup>21</sup> Paragraph A8.258, Ofcom, BCMR: Leased lines charge controls and dark fibre pricing Consultation, 2015

**Table 3: Forecast of average earnings**

	<i>Outturn 2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2010</i>
<i>Wages and salaries</i>	4.2	4.2	4.5	4.3	4.3	4.6	4.9
<i>Average earnings*</i>	2.6	2.2	3.6	3.9	3.9	4.1	4.4

Average earnings = wages and salaries / employees. Source: Table 3.6, Office of Budget Responsibility, Economic and Fiscal Outlook July 2015. <http://budgetresponsibility.org.uk/economic-fiscal-outlook-july-2015/>

110. We consider the appropriate range for average pay should be between 2.5% to 4% based on the current pay agreement and the expected rise in pay over the forecast period.

#### Non-pay inflation

111. On Ofcom's non-pay inflation assumption, we note that Ofcom has assumed 1.5% CPI inflation for all other non-pay costs. This is inconsistent with the CPI assumption assumed in the model, i.e. 1.9%. We also note that Ofcom's RPI inflation assumption of 2.3% is significantly below the 3.0% published by the OBR, as shown below.

**Table 4: Inflation forecast**

	<i>Outturn 2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2010</i>
<i>RPI</i>	1.5	0.1	1.1	1.6	1.8	1.9	2.0
<i>CPI</i>	2.4	0.9	2.1	2.8	3.1	3.1	3.2

a) Source: Table 3.6, Office of Budget Responsibility, Economic and Fiscal Outlook July 2015. <http://budgetresponsibility.org.uk/economic-fiscal-outlook-july-2015/>

#### WACC assumptions

112. In this LLCC Consultation, Ofcom has applied a WACC of 10.1% for both the Ethernet and TI baskets, based on a further disaggregation of the previous "rest of BT" WACC into "other UK telecoms", which includes leased lines, and a new "rest of BT" WACC, which would primarily consist of BT's Global Services division. Annex 9 of the LLCC Consultation document sets out Ofcom's assessment of BT's cost of capital and the WACC applicable to leased lines services. Annex 10 contains NERA's report on BT's equity and asset beta. NERA and CEPA provided beta estimates for some comparator companies.
113. We do not think there is a robust case for disaggregation. Firstly, we do not consider that Openreach beta should remain constant, particularly when the comparator data is updated to a more recent period. The general upward trend that Ofcom observes on the BT Group over the last 5 years has continued to reverse somewhat over the last 9 months or so. Therefore the reasons suggested by NERA and used by Ofcom for the increase are no longer convincing.
114. Specifically, since Ofcom last set a cost of capital decision in the 2014 Fixed Access Market Review<sup>22</sup> Ofcom has observed an increase in the estimated beta for BT Group. It postulates that this increase is not attributable to Openreach copper access or leased lines services and thereby justifying keeping the Openreach beta constant, resulting in a rise in the "rest of BT"

<sup>22</sup> Ofcom, Fixed Access Market Review Statement, 2014.

beta, and therefore requiring disaggregation of the "rest of BT" beta into two further constituent parts. We disagree with this.

115. Firstly, the available evidence does not support each of the hypotheses put forward by NERA and used by Ofcom that they point towards increased risk in other parts of BT. We have commissioned FTI Consulting to provide the supporting evidence. Secondly, Ofcom has not considered the impact of the volatility of the rest of the market on the relative riskiness of BT Group as a whole, which could feed through investors' perceptions regarding the relative riskiness of Openreach copper access. We consider that once the Openreach beta is updated, the issue around a "high" rest of BT beta diminishes, and Ofcom's case for further disaggregation becomes weak.
116. Moreover, even if Ofcom believes, in principle, that there should be a second-stage disaggregation, the evidence presented on the comparator companies for the "other UK telecoms" and BT Global Services parts of "rest of BT" are weak and variable. They do not stand up to scrutiny in the way that the utility betas have done for copper access, and as a result, there is a large amount of judgement to be made in order to arrive at Ofcom's view of the disaggregated WACC for the different lines of business. We note that previously Ofcom had put forward the case for further disaggregation of the BT Group beta (for example in the Cable & Wireless appeal to the 2009 Leased Lines Charge Control) based on a number of reasons including lack of available evidence on comparator companies. Its position as set out in the LLCC Consultation has now changed, even though the evidence remains the same.<sup>23</sup>
117. Ofcom's proposals for disaggregation in this LLCC Consultation do not set good regulatory precedence for future decisions where further attempts may be made to justify project-specific WACCs. The three criteria for disaggregation set out in Ofcom's 2005 Cost of Capital Statement<sup>24</sup> have not been met and therefore there is not a case to support a radical change to Ofcom's established approach.
118. We understand that Ofcom will be updating the WACC parameters for the 2016 BCMR. Our analysis shows that based on current updates as of 30 June 2015, the arguments put forward by Ofcom for further disaggregating the rest of BT beta diminishes and is not supported by the more recent evidence. We consider that the appropriate WACC to be applied to leased lines services continue to be the rest of BT WACC based on a two-way disaggregation between Openreach copper access and the rest of BT. This means that pre-tax nominal WACC to be applied to leased lines is 10.6%.
119. We set out the details of our response to Ofcom's approach to determining the appropriate WACC to apply to leased lines services in our Annex I, and supported by the FTI Consulting report on BT WACC.

***Question 5.4: Do you agree with our proposals in relation to the types of discount that would contribute towards BT meeting its charge control obligations for Ethernet and TI services? If not, what alternative would you propose and why?***

120. We provide below our response to Ofcom's proposal relating to the treatment of discounts, outlined in paragraphs 5.51 to 5.108 of the LLCC Consultation. Our comments on the proposals

<sup>23</sup> Competition Commission, Cable & Wireless UK v Office of Communications, Case 1112/3/3/09 (Section 4): [http://www.catribunal.org.uk/files/1112\\_Cable\\_Wireless\\_Determination\\_300610.pdf](http://www.catribunal.org.uk/files/1112_Cable_Wireless_Determination_300610.pdf)

<sup>24</sup> Ofcom's Final Statement on "Ofcom's approach to risk in the assessment of cost of capital", August 2005: [http://stakeholders.ofcom.org.uk/consultations/cost\\_capital2/statement/](http://stakeholders.ofcom.org.uk/consultations/cost_capital2/statement/)

for implementation are set out separately in our response to Section 10 of the LLCC Consultation.

121. We agree with Ofcom that BT should be allowed to offer each type of discount (volume discounts, geographic discounts, time-limited discounts and term products) subject to the non-discrimination obligations (paragraph 5.56 of the LLCC Consultation and paragraphs 8.72-8.80 of the BCMR Consultation).
122. However, we do not agree with Ofcom that there is a need for an additional test to decide whether such discounts should be allowed to count towards BT's compliance in the charge control.
123. It is BT's view that all forms of discounts offered by BT which are compliant with competition and regulatory law should be allowed to count towards BT's compliance in the charge control as they cannot be considered as unduly benefiting BT. Any anti-competitive risks associated with such compliant discounts will either be immaterial or will be outweighed by their benefits. Ofcom's decision not to include some forms of discount in the basket on the basis of additional potential risks (paragraph 5.57 of the LLCC Consultation) is unjustified. In particular, the test outlined in the first bullet point of paragraph 5.57 is superfluous, as it is always met where discounts are compliant with competition and regulatory law.
124. Discounted products are important for BT to secure the volumes it forecasts, and therefore stimulate the market. Fundamentally Openreach is increasingly only able to achieve the overall forecast volumes used by Ofcom in calculating the charge control through targeted price offerings including discounts of various types. As Ofcom's BCMR analysis recognises, even where Ofcom proposes to find BT (Openreach) has SMP, there are an increasing number of competitor offerings all targeting different market sectors and segments. When they are not included in the basket, this reduces BT's commercial incentives to offer those price discounts. This is all the more true in a CPI-13.75% control, where the overall amount of price reductions required is high and further reductions outside the basket usually cannot be sustained. If discounts are not credited for basket compliance, then there is a significant risk that any discount schemes offered would lead to returns below the cost of capital.<sup>25</sup>

### **Geographic discounts**

125. Ofcom proposes that geographic discounts should not count towards compliance. BT disagrees with Ofcom.
126. Ofcom's proposal may disincentivise BT to offer geographic discounts, to the detriment of its customers, both external and internal.
127. The level of costs in some geographic areas is higher than in other places. In our response to question 6.1, we show the distribution of costs of serving circuits. Within the context of Dark Fibre, the use of a geographically averaged price can become inefficient if this encourages inefficient market entry because prices for particular geographic areas do not reflect the underlying costs without BT being penalised within the basket. To avoid this inefficient market entry, Openreach may need to consider offering geographic discounts that better reflect these

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<sup>25</sup> For illustration purposes, if Openreach has 100,000 circuits of which one sixth (16,700) are offered at an additional discount of 15%, Openreach's revenues would be reduced by c. 2.5%. If ROCE was forecast at 10% and margin forecast at 12.5% this would make the actual ROCE 8% i.e. a 20% impact on ROCE. Ofcom does not take into account this effect in their modelling of the X.

underlying costs. However, Openreach has reduced incentives to do this where such discounts are not recognised for charge control compliance purposes.

128. By recognising such discounts within the basket, Ofcom could better reflect the need to ensure that prices in a prospectively competitive market are set at a level consistent with the costs that would be faced by an efficient competing network provider.
129. If Ofcom decides to maintain its proposal that geographic discounts are as a rule not allowed to count towards the charge control and that a Dark Fibre remedy be introduced, we would like to explore with Ofcom the forms of geographic discounts that would be beneficial to customers, and would mitigate the major risks of under-cost recovery due to Dark Fibre that can be included within the basket.

### **Time-limited discounts**

130. Ofcom proposes that time limited discounts will count towards compliance. BT agrees with Ofcom for the reasons explained by Ofcom in paragraphs 5.68 – 5.70. They enable BT to test the market, and are key to delivering migrations from legacy services, which will remain a significant focus as the WES/BES support ends in 2018.

### **Term discounts**

131. Ofcom proposes that only three year term products as defined by Ofcom will count towards compliance and that no other term discount products will count towards compliance. BT disagrees with Ofcom.

#### Five and seven year term discounts

132. Openreach has offered term discounts for five and seven year commitments (paragraph 5.71 of the LLCC Consultation), and they represent a significant share of Openreach's revenues. Based on our current modelling of the 2016/18 charge control, we estimate term discounts would represent nearly 3% of Ethernet revenues in the existing non-WECLA area, in the absence of any price controls. This represents an extra 3% of revenues compared to revenues for Ethernet up to and including 1G outside WECLA.

### **Table 5 ✕**

✕

133. As outlined in paragraph 5.75 onwards of the LLCC Consultation, five year and seven year term discounts – provided they are offered in compliance with competition and regulatory law – are beneficial to both Openreach and its customers, by allowing Openreach to effectively compete in the market, and matching customer demand for term products.
134. Openreach has regularly refused requests from CPs to make more significant reductions to the five and seven year term products, given these do not count towards its compliance with the charge control; commercial grounds alone do not justify further price reductions than those granted performed on one-year term products.
135. In any event, downstream BT does not have an advantage in consuming more term products. As we have outlined in previous engagements with Ofcom, the requirement for term discounts differentiates between business segments. For example, Business & Corporate customers typically have three to four year contract periods. 3%, and it is the nature of their business that

defines the term, rather than whether they are large or small, or whether they are internal or external CPs.

136. We provide below an illustration in relation to  $\mathbb{X}$ , which demonstrates that in a market with no charge control, the propensity to consume term products is  $\mathbb{X}$  with external CPs. In this example,  $\mathbb{X}$  of  $\mathbb{X}$  products purchased by external CPs are on five-year terms, because external CPs see the value of the discounts that match their requirements. This is compared with  $\mathbb{X}$  of  $\mathbb{X}$  products purchased by internal CPs being on five-year terms.

**Table 6**  $\mathbb{X}$

$\mathbb{X}$

**Figure 1**  $\mathbb{X}$

$\mathbb{X}$

#### Three-year term

137. BT agrees with Ofcom's proposal to count three-year term products towards compliance with the charge control. However, instead of a term discount, Ofcom proposes a spread payment product, which spans three years, corresponding to a typical duration of a contract, and enabling CPs to pay the connection fee over the three years. This proposal has the merits of simplicity, transparency with a rental pegged at the rental for the one-year term plus a third of the connection for each year over three years. It prevents potential issues of distortion between one year pricing and term product pricing as customers know at any point in time what they should be paying and they have confidence that they will benefit from future price reductions. This proposal could meet the needs of selected CPs who have expressed an interest in not paying the connection upfront.
138. However we note that CPs  $\mathbb{X}$ . Openreach is investing upfront and we would like clarification from Ofcom that it has included this factor when modelling the  $\mathbb{X}$  for the control and the target return on capital. It should also be noted that there are further operational implications for Openreach, as it will need to make adjustments to its ordering entry and billing system. Estimates of costs have not been produced at this stage, but BT would be happy to provide these.
139. In summary, and for avoidance of doubt, BT supports the principles of Ofcom's proposal for a three-year term product variant, subject to the comments set out above.

#### Extension to five-year term

140. In BT's view, Ofcom should at the very least apply to the five-year term products similar principles to those it proposes for the three-year term products, i.e. where the connection fee is spread across the five years, and where the rental for a five-year term product is the same as the rental for a one-year product.
141. Beyond that, we propose that Openreach should be allowed to absorb the connection fees into the rental charges for five-year term products.  $\mathbb{X}$  this approach would simply allow for Openreach to compete on a level-playing field.
142. We would therefore propose a straightforward pricing structure where, for five-year term products, the rental for a five-year term product is the same as the rental for a one-year product at any point in time, and the customers are not required to pay an upfront connection charge.

Although CPs may consider this to be too modest a discount, and although we would normally prefer to have more flexibility in responding to market demands than a fixed discount product, this could be an option that has the merits of transparency, offers a slight discount to customers, and could further stimulate adoption of Ethernet connectivity.

143. For clarity, we recap below the options that Ofcom should consider, illustrated on the example of a product that would have a £4200 rental and a £2100 connection in its one-year term variant.

**Table 7 – Spread and Discount term products**

		Connection charge	Rental charge	Total Cost of ownership over three years	Total Cost of ownership over five years	Comments
A	One-year term	£2,100	£4,200	£14,700	£23,100	
B	Three-year Spread (Ofcom proposal)	£0	£4,900	£14,700	£24,500	Connection charge spread over three years into rental charge
C	Five-year term Spread	£0	£4,620	n/a	£23,100	Connection charge spread over five years into rental charge
D	Five-year Discount	£0	£4,200	n/a	£21,000	Connection charge absorbed into rental charge

### 3.4 Proposed controls for Ethernet services

**Question 6.1: Do you agree with our basket design proposals for Ethernet services, including the need for sub-caps and/or sub-baskets? If not, what alternative would you propose and why?**

#### Baskets and sub-baskets

144. Ofcom's key proposals are summarised in paragraphs 6.4-6.5 of the LLCC Consultation:

*"We propose a single charge control basket covering CISBO services up to and including 1Gbit/s outside the CLA (the Ethernet basket). We propose that the price cap for this basket should be in the range CPI-9.75% to CPI-17.75%, with a proposed base case of CPI-13.75%.*

*We are also proposing sub-baskets and sub-caps where we believe that the overall basket cap would not offer sufficient protection to customers."*

145. We agree that it is always preferable to define a broad basket including all products within a defined market. In this case we would therefore agree with a broad Ethernet basket including all products up to and including 1Gbit/s.

146. Ofcom's proposed controls on the Ethernet basket are set out in Table 6.1 and in paragraph 6.21 and discussed in more detail in paragraphs 6.145-6.177 of the LLCC Consultation. Our comments are as follows:

- **A sub-basket on 1Gbit/s EAD services** (paragraphs 6.146-6.149): we understand Ofcom's proposal for a sub-basket on EAD 1Gbit/s services controlled at CPI-X, although the presence of this sub-basket does significantly reduce Openreach's flexibility to focus price cuts according to market needs. Although we strongly disagree with a need for the basis of charges control between EAD Standard and EAD LA based on LRIC differentials, we agree it would then make sense to exclude EAD LA products from the EAD 1Gbit/s basket if such a basis of charges condition was put in place. We discuss this in more details below.
- **A sub-basket on Interconnection services** (paragraphs 6.153-6.159): We note that current BTL revenues form a very small portion of the overall basket hence it appears that the complexity introduced by this requirement will outweigh any intended benefits.
- **A sub-basket on Ethernet main link charges** (paragraphs 6.150-6.152): we disagree there is a need for a separate main link sub-basket.
  - Given that the proposed main link sub basket would also apply to the 1Gbit/s sub-basket,<sup>26</sup> as well as the main charge control basket, this constitutes a third layer of price constraint regulation. Three layers of constraint is not simply a challenge of over-complexity, it constitutes a serious risk of over-constraining Openreach's choice when complying with the charge control. The outcome of such an over-constrained system could be a series of irrational price changes reflecting neither market demand nor indeed Ofcom's intention.
  - Given the CPI-13.75% and starting charge adjustments, Openreach will have to reduce the main link charges anyway, since main link and rental are the two charges that have most impact on the discharge.
  - A separate basket with a glide path removes some of the flexibility to make a significant change to main link in a given year. Should Ofcom decide to impose a main link sub-basket, BT would need to have the flexibility for carry-over of over-discharge of price reductions in the sub-basket. We seek confirmation that Ofcom is indeed planning for the carry-over formula to be computed for each sub-basket.
  - There are also issues with granularity of the main link charges, as Openreach must change main link by 0.012p increments due to system constraints. Each increment would currently represent a  $\pounds$  discharge for that basket, and would represent  $\pounds$  by the end of the control. Given all main links for all products (EAD, WES, BES) are identical, at all bandwidths, and given the scale, this means that each incremental reduction is worth  $\pounds$  of revenue.<sup>27</sup> It is not possible for Openreach to make any price reductions to main link which would have an impact on annual revenue of anything less than  $\pounds$ .

<sup>26</sup> Main link is already represented in the EAD 1Gbit/s basket proposed by Ofcom and accounts for  $\pounds$  of 1Gbit/s basket revenues.

<sup>27</sup> Includes current WECLA and non-WECLA revenue. This number increases to  $\pounds$  when considering that resilience main links should be decreased by a similar increment to standard main link.



- **A sub-cap on charges for all services within the Ethernet basket** (paragraphs 6.164-6.167): We describe in Annex B of this document that the requirements for price rebalancing due to Dark Fibre has been understated by Ofcom (paragraph 6.171).
  - Rather than the £2m requirement identified by Ofcom, we envisage a significant need for rebalancing to the tune of  $\pounds 20$  / year, or approximately  $\pounds 20$  of in-basket revenues at 2015/16 prices.
  - In addition we describe below that the introduction of Dark Fibre exacerbates the need for Openreach to make significant changes to the pricing structure, where new product variants would need to be priced at a level above the current (averaged) prices. Ofcom's current proposals appear to prevent this.
  - Notwithstanding the above, if Ofcom proceeds with such sub-caps we propose that the mechanism is changed such that sub-caps apply to a one-year total cost of ownership including connection, rental and main link charges over one year, allowing for the flexibility of rebalancing connection charges, as payback times will significantly increase in this control. We discuss this in more detail in our response to Question 10.1 below, and use the worked example of EAD100Mbit/s reaching payback times of close to  $\pounds 20$  in certain scenarios to illustrate the need for this new mechanism.
- **No sub-basket on other connectivity services** (paragraphs 6.160-6.163): We agree that a separate sub-basket on legacy products would be inefficient. When reducing EAD products more than legacy products, Openreach aims to stimulate demand for the strategic, more efficient products, and to incentivise CPs to migrate. Openreach does that at the risk of losing revenues in the year, because EAD volumes typically rise sharply, and thus Openreach's accrued revenues do not fully reflect the extent of the price reductions applied.
- **Ancillary services** (paragraphs 6.178-6.180): We disagree that ancillary services such as upgrade, migration, cancellation, shift or service features charges, should be included in the basket (Condition 5D.21 refers to "each service other than rental"). These constitute a very small fraction of Openreach revenues, and add disproportionate complexity and burden to Openreach's compliance while not generating any benefits to customers. The Ofcom proposed safety cap on charges would be sufficient. Ofcom should not require that Openreach includes ancillary services in the calculation of accrued revenues. We discuss this in more detail in our response to Question 10.1 below.

147. We discuss Ofcom's proposed treatment of ECCs and TRCs in response to Questions 9.2 and 9.3 below.

**Ofcom's analysis of the potential active price rebalancing which may be required as a result of Dark Fibre (paragraphs 6.168-6.177 of the LLCC Consultation)**

148. We discuss below in more detail the need to remove the basis of charges constraints on EAD Standard (STD) versus EAD Local Access (LA), as well as the requirements for increased price flexibility.

**Basis of charges obligation for EAD STD vs LA**

149. We discuss in Annex C of this response why Ofcom's proposal to set a basis of charges obligation for EAD STD vs EAD LA is not objectively justifiable, is disproportionate in relation to what it is intended to achieve, and could lead to significant distortion.

150. Ofcom's justification for introducing this remedy is flawed for a number of reasons, making it not objectively justifiable:
- First, Ofcom overstates the risk of undue discrimination by BT. The propensity for both external and internal CPs to use LA circuits as opposed to STD is converging, with all CPs increasingly taking LA circuits.  $\propto$ . Where geographic coverage is concerned,  $\propto$ . Changing the price difference between STD and LA is likely to undermine investments in Ethernet PoPs made by CPs  $\propto$ .
  - Second, Ofcom should allow BT to recover more costs from standard circuits, which are significantly more complex than LA circuits.
  - Third, LA circuits can be available from any type of exchange not just ASNs, hence any concerns of geographic risks are not founded.
  - Fourth, Ofcom's analysis has been conducted on historic data, and pricing data used for the analysis is not correct.
  - Finally, Ofcom has discarded wider information available on cost, e.g. FAC and DSAC which show that the cost structure for Standard is fundamentally different to that of LA.
151. In any event, Ofcom's proposed remedy is disproportionate. It requires adjustments of  $\propto$  on EAD1Gbit/s rental, and  $\propto$  on EAD10/100Mbit/s rental by April 2017/18 resulting in  $\propto$  revenue reduction, which is  $\propto$  of the required give-away for the first two years of the control and  $\propto$  of the total give-away required for the three year of the control period. Moreover, it undermines Ofcom's CPI-X charge control approach, and creates complexities of implementation, it prevents BT from responding to market demand or competitive pressures on prices, and it creates a linkage between prices and incremental cost on an absolute basis, rather than on a proportional basis.<sup>28</sup>

#### **Requirement for increased pricing flexibility**

152. If Dark Fibre is mandated at EAD 1Gbit/s minus pricing resulting in aggregation, stranded assets and unrecovered costs, then Openreach will be under commercial pressure to implement new forms of pricing and new product variants that may enable improved circuit-by-circuit cost recovery. We introduce below three possible approaches, which we broadly refer to as price de-averaging, and which would require further consideration and analysis:
- New product variant based pricing;
  - On-net vs off-net pricing; and
  - Asymmetrical active and passive pricing.

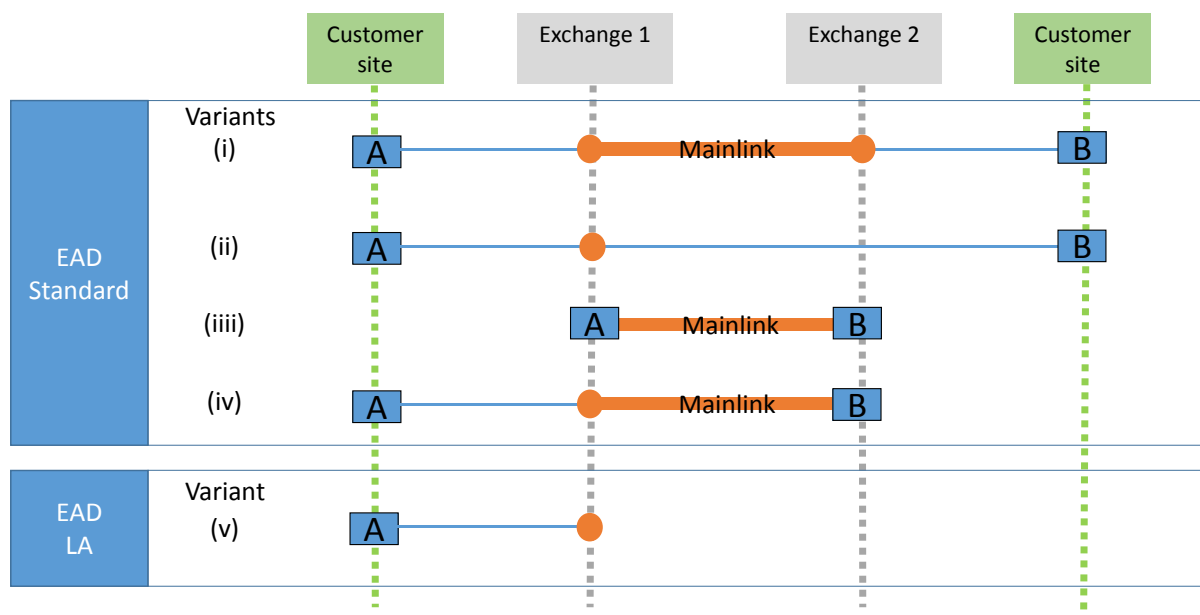
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<sup>28</sup> By that we mean that it is the price/cost ratio that should be constant, not the difference between price and cost. For instance if a product A is priced at £1100 and costs £1000, if it is used as reference for pricing a product B that costs £2000, then the pricing of product B should be showing the same price/cost ratio, and thus its price should be £2200, as opposed to £2100. This would ensure that the margin on both products is 10%.

New product variant based pricing

153. Openreach has traditionally offered two types of volume Ethernet products, these being LA circuits and STD circuits:
- An LA circuit connects a customer site or network node (B-end) to a BT Local exchange (A-end) from where the CP has a PoP with existing backhaul or core connectivity arrangements; and
  - A STD circuit is the collective term for circuits that connect a customer site or node (B-end) to a BT exchange where a customer does not have a PoP with main link rental being charged on a per metre basis to connect the circuit to another BT exchange (A-end) where the CP will have their PoP. In some cases the EAD STD might also connect from the A-end BT exchange to another customer site or network node (A-end). So unlike a LA circuit a STD circuit could involve two BT exchanges and also a second remote customer site/node with the added engineering complexity this entails.
154. STD and LA circuits are available from Openreach in almost all of the c.5,500 exchanges. The limiting factor on LA coverage is the extent to which CPs have taken co-locate space and have installed an Ethernet PoP in order to be able to connect EAD LA circuits. Outside of the EBD backhaul footprint EAD STD is also used by CPs to connect their PoPs in BT exchanges to provide backhaul and in this scenario the EAD STD would connect the two BT exchanges and there would be no remote customer site/node connected. Inside the EBD footprint EBD would typically be used as it offers a lower total cost of ownership.
155. We consider this de-averaging may be a necessary step to protect Openreach from under-recovery of costs if Dark Fibre is mandated at an EAD 1Gbit/s minus price, but it would be a step we would not take lightly as we consider it would be a retrograde step for the market, with winners and losers in terms of prices being higher for more complex circuits (typically business connectivity) and lower for more straightforward circuits (typically backhaul). In the future, the combination of Dark Fibre and significant price reductions from a CPI-13.75% charge control means it will no longer be affordable for Openreach to recover proportionally more against its cost base from backhaul services, thus requiring an increase in prices on business connectivity services.
156. Implementing de-averaging would also require systems and process development which would be an unwanted distraction from other portfolio evolution opportunities, on top of the distraction caused by the need to develop a Dark Fibre offering.
157. The figure below shows possible de-averaged product variants for new supply, which we illustrate in Figure 2 below:

**Figure 2 - Possible de-averaged EAD product variants**



Key:

- (i) Site to BT Exchange + main link to another BT Exchange to another Site
- (ii) Site to BT Exchange to Site
- (iii) BT Exchange to BT Exchange
- (iv) Site to BT Exchange + main link backhaul to another Exchange
- (v) Site to BT Exchange (LA)

#### On-Net and off-net de-averaging

158. On-net is used to refer to sites connected by existing Openreach fibre infrastructure and off-net refers to sites where there is no existing Openreach fibre infrastructure, e.g. a greenfield site. The principle is that at sites already connected by Openreach fibre infrastructure there would be lower costs to serve subsequent circuit orders.
159. Openreach would also consider if on-net and off-net new product variants would be appropriate to best reflect the costs to serve in their respective pricing, so that going forward the risk of under-recovery of costs due to Dark Fibre is mitigated. We believe that Ofcom has not fully considered this potential impact of Dark Fibre to make some sites and routes very unattractive because subsequent circuit demand will not emerge once Dark Fibre is connected providing unlimited bandwidth.
160. We consider the market has benefitted from averaged costing and averaged pricing of EAD and that on-net and off-net de-averaging could have negative implications for the affordability of Ethernet in remote sites and complex circuits. The map in Figure 3 below shows sites in amber where the costs to serve were between  $\pounds 10$  or  $\pounds 20$ , and red where the costs to serve were more than  $\pounds 20$ .

**Figure 3**

$\pounds 10$

161. From Figure 3 it can be seen that the implications of product variant based pricing and removal of the ECC exemption will not just be experienced in a small number of remote locations, the impact would be felt nationwide affecting network expansion and the availability of affordable Ethernet and Dark Fibre.
162. This would lead to the following product variants being offered as on-net and off-net products, with significantly more variations and therefore uncertainty for customers in what they would have to pay for a new circuit.

Variant	On-Net	Off-Net
(i) Site to BT Exchange + main link to another BT Exchange to another Site	X	X
(ii) Site to BT Exchange to Site	X	X
(iii) BT Exchange to BT Exchange	X	X
(iv) Site to BT Exchange + main link backhaul to another Exchange	X	X
(v) Site to BT Exchange (LA)	X	X

#### Asymmetrical active and passive pricing

163. Openreach would like to explore with Ofcom the appropriateness of creating new product variants including on-net and off-net variants of Dark Fibre whilst maintaining the existing Std and LA product variants for active EAD products. This would make Dark Fibre more reflective of the costs to serve and mitigating the risks of under-recovery due to Dark Fibre aggregation subsequently inhibiting subsequent demand. Maintaining the existing EAD pricing structure conversely could help maintain the advantages of averaged product type pricing and certainty for the business connectivity market. We consider below two forms of asymmetrical pricing between active and passive:
- Removal of ECC exemption for Dark Fibre; and
  - Special forms of volume discounts.

#### **ECC exemption removal for Dark Fibre**

164. With any form of de-averaging based on product differentiation including on-net and off-net variants, Openreach would also have to consider the appropriateness of withdrawing the Excess Construction Charge (ECC) exemption which provides industry with greater certainty by covering the ECCs up to £2,800 funded by a balancing £548 charge on all EAD orders.<sup>29</sup> Maintaining the ECC exemption would be counterproductive if Openreach decided it was

<sup>29</sup> excluding RO1 variants.

appropriate to reflect de-averaged costs and prices. As Dark Fibre inherently presents additional risk that the fibre strand will not be further reused (because a customer only needs a single Dark Fibre for a given route as further upgrades are made on the electronics), we would consider whether the exemption should remain in place for active products only.

### **Special forms of volume discount**

165. ✂

166. ✂

167. Should Dark Fibre be introduced at EAD 1Gbit/s minus prices, Openreach considers that such forms of asymmetric pricing between active and passive products could mitigate some risks associated with inefficient take-up of Dark Fibre solely based on price arbitrage.

**Question 6.2: Do you agree with our approach to deriving our base year costs for Ethernet services, including in particular:**

- a. our proposal in relation to the technology assumed for supplying controlled Ethernet services for modelling purposes;**
- b. our proposed cost adjustments to BT's 2013/14 RFS to form the base year costs; and**
- c. our proposed treatment of BT's costs relating to QoS?**

**If not, what alternative would you propose and why?**

168. BT has no comments on Ofcom's MEA approach.

### **2013/14 TI Error correction**

169. BT agrees with Ofcom's proposed cost adjustments to BT's 2013/14 RFS in relation to error corrections for TI services. Whilst BT agrees that the Core Transmission Costing System (CTCS) allocation error identified as part of the LLCC review requires exclusion of those costs from the TI base year costs, there should be an equal and opposite adjustment to the Ethernet base year costs, as the effect of this error was primarily to move costs from TI to Ethernet. Please see our response to Question 7.4 for more details.

170. Ofcom has understated the base year costs by £18.2m and to reflect this must therefore adjust upwards the Ethernet base year costs by £18.2m.

### **Dark Fibre implementation costs**

171. BT is concerned that if Ofcom has underestimated the migration to passive alternatives (if mandated) then there will be some non-avoidable costs which BT is unable to recover. BT agrees that it should be allowed to recover Dark Fibre implementation costs in the Ethernet basket as this will allow recovery from both the active and passive product set (paragraph 6.117).

172. BT disagrees with how Ofcom has applied any cost adjustment relating to one-off costs. Ofcom proposes that these costs are spread over the duration of the charge control. This means that only one third of the one-off costs are included in the final year of the charge control. Ofcom's methodology will not allow BT to recover all of its efficiently incurred costs relating to the provision and implementation of a passive product.

173. Ofcom has spread non-capitalised one-off development costs over the duration of the charge control, i.e. of the £30 one-off training and operations cost (BT response to Section D of the 10th s.135 dated 5 February 2015), £30 (£30/3 years in the charge control) is added to the final year cost stacks.
174. BT notes that by allowing an additional £30 of training and operations costs in the final year of the charge control, BT will not recover all of the £30 cash outlay.
175. BT has calculated the forecast Ethernet basket FAC during the duration of the control if the £30 final year adjustment (made to allow for non-capitalised one-off costs) was removed. The total FAC calculated is £30 less than when the £30 cost uplift is applied. Subsequently, there will be c£30 of unrecovered costs (£30 spent less the additional £30 gained by making the final year adjustment) within the duration of the charge control, as a result of only allowing £30 in the final year of the control.
176. BT also notes there are likely to be additional Dark Fibre implementation costs. These costs would only be understood on full completion of the design of the remedy, and after a period of piloting. Should the implementation costs diverge for the amounts assumed for modelling purposes by Ofcom, BT proposes that the difference is recovered as a premium on the Dark Fibre price. Please refer to our response to Question 8.1 - Differences between the Dark Fibre Reference Offer and the benchmark EAD services for further details.

#### **Service level guarantee (SLG) payments**

177. Ofcom has calculated the assumed value of an efficient level of SLG payment in 2013/14 based on the 2011 rate and lead times (A7.71). Ofcom has compared this to the actual Ethernet SLG payment and made a £13.0m cost adjustment (Table A7.15).
178. To calculate this adjustment, Ofcom calculates what the number of the SLG incidents in 2013/14 would have been had the SLG rate been at the 2011 level. Ofcom then calculates what the average payment per SLG in 2013/14 would have been had the lead times for the delivery of services been at the 2011 level (A7.71). BT disagrees this is an appropriate approach as it is over-simplistic and does not reflect key drivers of the level of SLG costs.
179. Ofcom is correct in proposing that allowance should be made for the recovery of SLG costs via the charge control calculations. It is appropriate for the level of future SLG costs to be based on a prediction for such costs at an "efficient" level, given the statistical expectation of the volume of task failures together with the degree to which those tasks fail and thus incur SLG payments. However, BT does not agree with the method Ofcom has used to adjust the SLG costs in the base year, in order to feed into the prediction of future costs. Ofcom's method is over-simplistic; in particular it does not reflect the impact of changing mix of circuit bandwidth over time (since 2011 and into the future). Ofcom's proposed adjustment method therefore significantly under-estimates the level of allowable SLG costs.
180. In the May 2015 BCMR Consultation, Ofcom is proposing extensive new interventions in the management of Openreach Ethernet processes – particularly for provision, which is where the majority of SLG liabilities are incurred. Openreach is engaged on a major programme to improve and re-engineer provision processes, including reviewing and making changes to all the detailed aspects of the way SLAs and SLGs are defined and managed. All of this will influence the expected levels of total SLG costs that Openreach incurs in the future. Hence any accurate prediction of those levels would require not just sophisticated modelling but also, clarity of the outcome of our ongoing negotiations and collaborative process work with our CP customers. This negotiation process will continue for some months, and may not achieve total

clarity before Ofcom closes its work on the Leased Lines Charge Control. It is therefore likely that the projection of future SLG costs needs to be based on the best available view of relevant base year costs.

181. Although Ofcom has based its views on what “efficient” levels of service might look like, on the actual performance during calendar year 2011, it is not appropriate simply to read across key ratios such as “average SLG cost per affected job” unchanged from 2011 through to the charge control base year. Any prediction method should use as recent data as possible. Extrapolating from 2011 introduces very large degrees of error, for example on the impact of changes in the average SLG liability per order.
182. During the period from 2011 to date there have been significant changes in the nature of the market – changes in volumes of demand, mix of provision order types and in the mix of products ordered. Specifically the proportions of new orders for different bandwidths has changed significantly since 2011. For a given period of delay on a given order, the SLG payable is proportional to the prevailing rental price for the product ordered. Therefore, given the significant shift to greater proportions of 1G orders, away from 10M and 100M, since 2011, the SLG liability will have increased significantly, all else being equal. Ofcom’s proposed adjustment method does adjust the average SLG cost per affected order downwards due to the effect of charge control on prices, but it currently does not adjust that figure upwards to reflect the change in order mix towards higher bandwidth, rental, and SLG charges. This error would need to be corrected if Ofcom were to deploy an adjustment method. The adjustment method proposed by Ofcom is systematically biased and will produce an incorrect under-estimate of total “efficient” SLG costs.
183. An additional problem with Ofcom’s proposed adjustment method is in the way the “average SLG cost per affected order” is projected forward given the effect of the charge control to reduce prices over time. To use an overall average of charge control reduction in this way would be an incorrect assumption, given the significant change of bandwidth mix for orders affected. A more appropriate way to reflect the impact of charge control would be to take the historic price reductions on each of the product types over the period – and to project that forward with the forecast volume by bandwidth into the future. This would be complex to perform but would be the only way to correct for the implicit errors in Ofcom’s proposed adjustment method.
184. Therefore, we suggest that Ofcom should use the actual incurred 2014/15 SLG costs as the basis for its allowable cost. If Ofcom does not do this, and chooses to apply an adjustment method instead, then this method needs to correct the above errors in the method described in the LLCC Consultation.
185. Ofcom should also allow a mechanism to update the view of allowable costs in light of the current industry negotiations on changes to the SLA and SLG regime.

### **Quality of Service (QoS) Uplift**

186. BT agrees that it should be allowed to recover its efficiently incurred resource costs associated with improving its quality of service on an ongoing basis (A7.59) as part of the charge control. BT provided information relating to additional pay and other related costs incurred in 2014/15 to improve its quality of service (BT response dated 6 February 2015 to Question B1 of the 9<sup>th</sup> LLCC s.135 Notice dated 2 February 2015).
187. BT disagrees with how the cost adjustment has been applied in Ofcom’s model to allow recovery of these costs. A majority of the cost breakdowns provided are capitalised. In a



meeting between Ofcom and BT to clarify a number of Consultation issues on 9 July 2015, Ofcom confirmed that as part of its estimate of the cost adjustment, it used this information to determine the applicable opex (pay and non-pay).

188. Although BT incurred the additional cost in 2014/15, these costs will actually recur every year to support the provision of minimum service levels, i.e. BT anticipates that the cash cost (opex and capex) incurred in 2014/15 will also be incurred in 2015/16 and throughout the duration of the charge control period.
189. BT considers that Ofcom should amend its cost adjustment so that the cash costs of improving quality of service are treated as a recurring annual cost throughout the duration of the charge control period. Our best estimate of the annual cost to BT will include both the operating and capital expenditure provided to Ofcom as part of our response to question B1 of the 9<sup>th</sup> LLCC s.135 Notice. Such treatment would more accurately reflect the nature and timing of these costs and would allow BT to recover its efficiently incurred resource costs.
190. Ofcom should also note the phasing of additional resource in 2014/15. As costs were incurred during 2014/15, the cost breakdowns provided are not representative of a full year (additional resource was added throughout the year so Q4 costs are higher than the preceding quarters). Ofcom should use the equivalent full year cost when modelling 2015/16 and subsequent years.
191. BT estimates that applying the amendments in the paragraphs above (inclusion of capitalised costs and resource cost phasing) will result in a cost uplift of £3< in the final year of the charge control. Ofcom's modelling results in a cost uplift of £3< in the final year of the control and consequently does not allow BT to recover all of these costs. The table below illustrates this:

**Table 8 – Final Year Quality of Service Cost Adjustment**

	£ millions
BT calculated adjustment in FY18/19	3<
Ofcom adjustment in FY18/19	3<

#### **Other base year adjustments**

192. BT has no further comments here with regard to the following proposed Ethernet base year costs, namely; Access Cards, RAV, Cumulo, Transmission Equipment and Restructuring (Table 6.2 in the Ofcom Consultation).
193. Our comments with regard to the proposals relating to attribution errors and General Overheads are contained in our separate response to the Consultation on the "Review of BT's cost attribution methodologies" of 12 June 2015.
194. Please refer to the response to Question 11.1 below, for further details on BT's response to the proposed reporting requirements relating to Transmission and Restructuring costs.

**Question 6.3: Do you agree with our approach to forecasting costs and revenues over the period of the charge control in relation to Ethernet services, including in particular:**

- a. our volume forecasting assumptions;**
- b. our efficiency forecasting assumptions; and**
- c. our proposal to reflect the impact of the proposed dark fibre remedy?**

**If not, what alternative would you propose and why?**

## **Volume forecasts**

- 195. Ofcom has adopted a top-down approach to volume forecasting which is credible and as cited consistent with our approach and those adopted by other CPs and industry analysts. Ofcom concludes that the volumes we have submitted are unlikely to have bias primarily due to (1) use of our internal business planning numbers (i.e. BRF) and (2) analysis of the accuracy of our previous forecasts with actual volumes in 2012/13 and 2013/14.
- 196. Ofcom's analysis of our current forecasts with other CPs and industry analysts (IDC and Ovum) demonstrates that for all services up to 1Gbit/s our forecast growth rate is comparable to industry analysts.
- 197. For above 1Gbit/s circuits our growth trend is slightly slower than most other forecasts.
- 198. Ofcom has correctly based their forecast of 1Gbit/s and above services primarily on our forecasts – a number of reasons are cited with the chief one being that we have not systematically under-forecast circuit volumes at 1Gbit/s and above.
- 199. Ofcom forecasts that the total number of Ethernet circuits will increase by around 45% to 2018/19 compared to 2013/14.
- 200. The majority of this growth is driven by 100Mbit/s and 1Gbit/s circuits, which are both forecast to grow by almost 90% by 2018/19 (vs. 2013/14).

## **3.5 Dark Fibre volume forecasts**

- 201. In paragraph 6.82 of the LLCC consultation, Ofcom introduces its assumptions for estimating the level of cannibalisation of active circuits by the proposed Dark Fibre remedy.
- 202. As we have set out in sections 4 and 17 of our response to the May 2015 BCMR Consultation, we consider Ofcom's estimates to be significantly understated:
  - Ofcom assumes one-for-one substitution between active circuits and the proposed Dark Fibre, and the total number of circuits will not change. Assuming a one-for-one substitution is not appropriate. We have shown that within the rest of UK/London Periphery,  $\propto$  of circuits share a route with at least one other circuit from the same CP. At the price of EAD1Gbit/s minus, it only takes two EAD10Mbit/s or EAD100Mbit/s circuits to be aggregated, for Dark Fibre to become more commercially viable. If aggregation is made possible across circuits of different CPs then this risk will substantially increase to around  $\propto$  of circuits. Moreover, our view is that the percentage of circuits that can be aggregated in the backhaul sector is  $\propto$ , given the high concentration of circuits on a relatively small number of exchange routes.
  - Ofcom assumes both internal and external sales will be affected.  $\propto$

- **Ofcom assumes that demand for Dark Fibre is likely to start slow and rapidly increase.** Our customer insight shows that ✂. Because it is proposed at a very low price, which will continue to reduce over time, BT's view is that demand will rise much more sharply than Ofcom anticipates. ✂.
- **Ofcom assumes that CPs will only use the proposed Dark Fibre for new connections in this review period.** We disagree with Ofcom, and believe this is the most impacting, misleading assumption made by Ofcom. ✂
- **In addition, Ofcom has indicated in its BCMR consultation that it assumed EBD is not subject to cannibalisation.** We consider this to be only partially correct, because EBD is indeed distance independent. However, at August 2015 prices for both EBD and "EAD 1G minus" (i.e. the reference for Dark Fibre pricing), ✂ Ofcom is proposing that Dark Fibre prices in 2017/18 will be 30% lower than in 2015/16.

203. Ofcom therefore proposes in paragraph 6.83 of the LLCC consultation the rates of 50% cannibalisation of new connections for EAD, EAD LA, and OSA in the first year, and 100% in the second year, and no migrations of the existing base.

204. BT currently uses for its own planning purposes the following assumptions. ✂

**Table 9 - ✂**

✂

205. ✂.

206. ✂

207. ✂

208. In conclusion, we consider Ofcom's volumes to be largely underestimated. We set out in Figure 4 and Figure 5 below a view of the difference between Ofcom's and BT's assumptions on take-up.

**Figure 4 - ✂**

✂

**Figure 5 ✂**

✂

209. In summary, BT anticipates ✂ Dark Fibre circuits by 2018/19, which we compare to ✂ Dark Fibre circuits when we reproduce Ofcom's assumptions of no aggregation, and 50% of new supply in 2017/18 and 100% of new supply in 2018/19.

210. This is ✂ as much Dark Fibre as the volume we believe Ofcom is anticipating, and – while we accept that our volume forecasts will need refining – our view is that Ofcom has seriously under-called the risk of substitution by Dark Fibre, and as a consequence over-estimated the forecast number of active circuits leading to inaccurate calculations of CPI-X.

### 3.6 Application of efficiency assumption for Ethernet services

211. In the Efficiency Annex E to our response, we set out our general comments regarding Ofcom's approach to estimating the efficiency target for both Ethernet and TI services. It covers a number of key issues, including:

- Ofcom's departure from previous charge controls and focusing on the use of BT internal management planning documents for setting efficiency targets. There are various issues associated with this, including the fact that internal targets tend to be ambitious targets, and there are negative impacts on incentives through their use as regulatory targets. There are also questions around whether BT's planning documents (known as PVEOs) are fit for Ofcom's purpose because of the way they are constructed so that Ofcom's continued use would result in a continued overstatement of the scope for efficiency savings. Our concerns are supported by reports we have commissioned from Deloitte and FTI Consulting.
- A wide range of alternative sources of evidence that would suggest that Ofcom's proposed range of efficiency targets is out of kilter with observations for the telecoms sector, other regulated sectors and the UK economy as a whole, as well as BT's relative position to the best practice.
- Ofcom's modelling approach may be double-counting the scope for capex efficiency savings: once through the efficiency assumption and again through the asset price changes.

212. Ofcom also carries out two sets of analysis to determine the range of efficiency estimates specific to Ethernet services:

- Analysis of regulatory cost accounting information; and
- Analysis of BT's historical and forecast management accounting information.

213. We note that the efficiency assumption placed on Ethernet services has increased since the controls were first introduced in 2009, and the focus has consistently been the use of BT's internal data as the basis for Ofcom's assumptions:

**Table 10: Summary of efficiency assumptions on Ethernet leased lines charge control**

<i>Decision</i>	<i>Efficiency assumption</i>	<i>Source</i>
2009	2.8%	Based on assumptions set out in the 2009 LLU/WLR Statement
2013	4.5%	Most weight placed on past and projected efficiency savings for Openreach, reduced by 0.5% to arrive at a net efficiency figure
2016	4% to 7%, central estimate of 5%	Most relevance evidence considered to be historic and forecast internal management accounting data

Source: Ofcom

214. Based on a fuller consideration of the available evidence we believe that a more appropriate range to consider for Ethernet services is 2% to 5%, and not the 4% to 7% suggested by Ofcom. We also think that Ofcom should make an adjustment to the gross efficiency figure they estimate to account for the investments required to implement efficiency saving programmes. In the absence of further information we believe that this adjustment should be a 0.5% reduction, consistent with the approach taken in the 2013 BCMR Statement and previous LLU/WLR charge controls.

### **Regulatory cost accounting information**

215. Ofcom's calculates that the annual unit cost efficiency improvement for Ethernet services between 2009/10 to 2013/14 is around 8% to 10.5% per annum, summarised in Figure A8.32 of the LLCC Consultation. This is obtained by carrying out "pairwise comparisons" of changes of pay and non-pay operating costs, averaged over the four years to smooth out the year-on-year variations in the results. However, *"the year on year variability in the results... means we give this evidence low weight in our final proposals"*.

### Consistency with modelling approach

216. Ofcom highlights an issue associated with the availability of relevant data for assessing the implied historical efficiencies achieved by using data from BT's Regulatory Financial Statements. We note that Ofcom's modelling approach is a simplified view of BT's complex cost structure and business decisions, and is based on a snapshot of BT's cost allocation system. It is therefore not surprising that Ofcom is unable to obtain detailed level of information that matches their modelling inputs and approach. This is particularly the case for capital expenditure where programmes do not happen on a smoothed-incremental basis as would be indicated by Ofcom's asset volume elasticity ("AVE") assumptions. Similarly, the financial accounts do not tend to be sufficiently detailed to separately identify the purpose behind the capital expenditure, i.e. whether it was aimed at replacing existing assets or as a result of meeting new demand.
217. We agree with Ofcom that the analysis of costs using BT's Regulatory Financial Statements ("RFS") can only be carried out on operating costs, but we disagree with Ofcom's simplistic comparison of costs without ensuring that changes that are not relevant to the normal operating conditions are excluded from the analysis, described in the next section.

### Assessment of Ofcom's calculations

218. We have not seen Ofcom's calculations of the pairwise comparisons of Ethernet components, and therefore cannot comment on how the 8.0% and the 10.5% figures have been calculated. Our own analysis shows that whilst our accounts are prepared on the same basis for the year in question and the previous year, one-off adjustments and other accounting changes need to be removed in order to carry out a like-for-like comparison. For example:
- The CO485 Ethernet electronics component did not exist before 2012/13, so previous years' calculations need to be aggregated. In addition there was a counting convention change which would have required an adjustment to costs to allow comparability with the previous year's data.
  - In 2012/13 the WES & LAN extension services fibre (CO450) component costs reflected movements in provisions and IFRS accounting adjustment. In addition both

this component and the Ethernet switches (CN001) components were affected by the TSO OUC change.

- Similar to Ofcom's approach to excluding cumulo rates from the PVEO analysis, the same treatment needs to be adopted to reverse out the impact of the cumulo rebates in 2012/13 and 2013/14.

219. These one-off adjustments can have significant impact on the estimated efficiency, particularly as Ethernet services are allocated into a small number of components, and administrative components such as SG&A are excluded from the analysis. We estimate that the efficiency result in one of the years can halve when this is taken into account, and that the year-on-year variations that Ofcom was concerned about reduce.

#### BT's revised estimates

220. Based on BT's own calculations of the pairwise comparison of cost trends, we estimate that historic Ethernet efficiency is in the range of 3% to 5%, with an average of 4.5%. Our assessment of the data is that the year-on-year variations are not as significant as Ofcom suggest, and that it is consistent with what Ofcom had estimated in the 2013 BCMR Statement.<sup>30</sup>

221. Finally we note that Ofcom has made specific provisions for the costs associated with implementing an efficiency saving programmes in the 2013 BCMR Statement, and used a net efficiency savings figure in its model. Ofcom has not provided reasons why this has not been adopted in the LLCC Consultation.

#### **Management accounting information**

222. Ofcom has used BT's historical and forecast PVEOs in a number of charge controls, and has used it as the primary basis for its efficiency assumption in the LLCC Consultation. Ofcom has used the PVEO analyses for operating costs and capex for Openreach, but only operating costs for TSO (and BT Wholesale). Ofcom estimates that historical estimates of efficiency gains relating to Ethernet services are between 5% and 7.5% per annum from 2011/12 to 2013/14, and the forecasts show that between 5% and 10% efficiencies are expected in both 2014/15 and 2015/16. Here we examine the evidence that is specific to Ethernet services.

223. Ofcom estimates the historic operating cost efficiency for the different divisions in Figure A8.34 of the LLCC Consultation, and based on the weights set out in Figure A8.33 it arrives at a range for Ethernet service efficiencies. These have been based on BT in response to the 1<sup>st</sup> s135 notice submitted on 29 August 2014.

224. Ofcom's approach set out in Annex 8 suggests that Ofcom has relied directly on the PVEO analysis submitted by BT with no adjustments made. As part of our updated submissions to Ofcom we noted that the "*Efficiency category in these PVEOs contains savings that it would be appropriate to consider as due to Volume effects e.g. reduce volume of fault visits, for charge control purposes*".<sup>31</sup> It appears that Ofcom has not taken this information into account.

225. We note that the issues around the use of unadjusted PVEO analysis have been covered previously, for example in Openreach's response to Ofcom's 2013 LLU/WLR charge control

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<sup>30</sup> Ofcom adopted a similar analysis for the 2013 BCMR Statement using data from 2007/08 to 2011/12, where Ofcom estimated an average efficiency of 5% over this period.

<sup>31</sup> BT response to Ofcom's 6<sup>th</sup> s135 Notice, tranche 3, 19 December 2014.

consultation.<sup>32</sup> We have also set out our concerns regarding the use of these unadjusted figures, both in terms of principle as set out by Deloitte's analysis,<sup>33</sup> as well as in practice due to the way the "E" component is constructed for the purposes of internal management planning.

226. The revised data we provided to Ofcom adjust the PVEOs in order to ensure that a more appropriate measure is used for the purposes of Ofcom's cost forecasting model. When one-off items, other volume effects, etc. are removed from the "E" component of the unadjusted PVEO analysis we arrive at a range of historical efficiency estimate of 3% to 5%. Similarly for the forecasts we have a range of efficiency forecasts of 3% to 5%. These are well below Ofcom's estimated range.

**Table 11: Efficiency assumptions on Ethernet leased lines charge control**

	<i>Lower</i>	<i>Average</i>	<i>Upper</i>
<b>Historic</b>			
<i>Ofcom analysis</i>	5.0%	6.25%	7.5%
<i>BT analysis</i>	3%	4.0%	5.0%
<b>Forecast</b>			
<i>Ofcom analysis</i>	5.0%	7.5%	10%
<i>BT analysis</i>	3%	4.0%	5.0%

Source: BT calculations

227. Ofcom should note that since BT submitted the requested PVEO information in December 2014 there have been two further Business Unit Reviews ("BURs"). The most recent figures show that rather than achieve the target in the PVEO, Openreach missed that target for 2014/15 by more than 25%. As per our submissions, this demonstrates that it is unreasonable for Ofcom to put too much weight on Openreach's aspirational future efficiency targets (or any other units for that matter).
228. We also note that in looking at historic PVEOs Ofcom is assuming that past efficiency gains can be carried forward into the future. Evidence from BT's public announcements as well as brokers' reports suggests that there is a consensus that this is not expected by the market. Furthermore, Ofcom's previous approach of separately identifying catch-up versus frontier shift elements of efficiency specifically excludes past catch-up, and only allow for frontier shift and any expected reduction in existing inefficiency where the evidence supports it. As such, we consider Ofcom's analysis both overestimates the range of potential efficiency gains using data that had been superseded, and provides an unrealistic interpretation of future efficiency gains.

<sup>32</sup> Openreach response to Ofcom's consultation document, November 2013  
<http://stakeholders.ofcom.org.uk/binaries/consultations/llu-wlr-cc-13/responses/Openreach.pdf>

<sup>33</sup> Deloitte, BCMR 2015 – Efficiency estimation Review of Ofcom's approach on efficiency estimation. Annex G to BT Response to Ofcom's consultation document "Business Connectivity Market Review: Leased lines charge controls and dark fibre pricing". August 2015.

## Consistency with alternative sources of information

229. Ofcom's assumption of a 4% to 7% efficiency for Ethernet services does not appear in line with alternative evidence available, and does not appear consistent with views of BT's relative efficiency compared against other companies.
230. The TFP analysis<sup>34</sup> obtained by different studies of the telecoms sector show that a reasonable frontier shift assumption would be between 0.5% and 3.0%. This has been consistently estimated by different parties over different time periods and using different sets of comparators. When set against sector-wide and economy-wide TFP estimates we find further evidence of long term trends of 2% to 4% for the ICT sector as a whole, a sector that has contributed the most to the TFP growth in the overall economy.
231. Compared to the frontier shift assumptions used by other sector regulators in the UK we note that the range assumed tends to be around 0.25% to 3%, with a general consensus of estimates around 1%, and applied mainly to operating costs only, but sometimes also to capital expenditure. As FTI notes, Ethernet leased lines *"are a newer technology, although some time has elapsed since the previous BCMR"*, and that *"the novelty of the technology and concomitant scope for efficiency improvements"*. As such, *"general measures of productivity – and in particular, TFP, are more relevant"*.<sup>35</sup>
232. In terms of catch-up and BT's relative position compared to a benchmark company, BT's submissions to Ofcom show that there has been a closing of the gap between BT and the best practice frontier.
233. We believe a more balanced set of evidence is presented in the table below, using evidence from a wide range of sources. A more balanced view would be to place some weight on the data that is external to BT in order to check the overall reasonableness of the assumptions.

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<sup>34</sup> FTI Consulting, BT Leased Lines: Efficiency benchmarking. Annex H to BT Response to Ofcom's consultation document "Business Connectivity Market Review: Leased lines charge controls and dark fibre pricing". August 2015.

<sup>35</sup> FTI Consulting, BT Leased Lines: Efficiency benchmarking. Annex H to BT Response to Ofcom's consultation document "Business Connectivity Market Review: Leased lines charge controls and dark fibre pricing". August 2015.



**Table 12: Comparison of evidence on Ethernet efficiency**

<b>Source</b>	<b>Assumption</b>	<b>Comments</b>
<i>TFP analysis of telecoms sector</i>	0.5% to 3.0%	Cluster of estimates around 2%
<i>TFP analysis of ICT sector</i>	2.0% to 4.0%	
<i>Frontier shift assumptions made by other sector regulators</i>	0.25% to 3.0%	Consensus of 1% frontier shift
<i>BT's relative position</i>	BT has made catch-up improvements over time, and is now close to the frontier	
<i>Historic PVEO analysis</i>	3% to 5%	Does not exclude historic catch-up, so could overstate potential for future efficiency gains
<i>Forecast PVEO analysis</i>	3% to 5%	Includes one-off efficiency gains that may not be possible to repeat after the start of the charge control in 2016/17
<b>Range based on above evidence</b>	<b>2% to 5%, with a central estimate of 3.5%</b>	

Source: BT calculations

**Question 6.4: Do you agree with our proposals in relation to starting charge adjustments for Ethernet services? If not, what alternative would you propose and why?**

### **The application of starting charge adjustments to Ethernet control**

234. Notwithstanding BT's comments in response to Question 4.1 above regarding the change in approach to starting charge adjustments, we now comment on Ofcom's calculation of the starting charge adjustments to apply to Ethernet controls.
235. Should Ofcom still persist with its proposals it is imperative that errors in the application and estimation of the starting charge adjustments are corrected and the starting charge adjustment, rather than 9% as proposed, should be no more than 1.8%.
236. In addition to the above, BT disagrees with a number of the costs that Ofcom assumes are incremental to unregulated services (outlined in Table 6.4). BT's detailed comments on Ofcom's treatment of general overhead costs are outlined in BT's response to the Consultation on the "Review of BT's Cost attribution methodologies". Our principal position is that there is no reason for Ofcom to adjust the General Overheads attribution. Moreover, even if an adjustment was made, a more proportionate and balanced approach would be to treat it as a price glide (see response to 4.1 above). For this reason we disagree these attribution changes should lead to a start price adjustment. Furthermore, with the exception of insurance costs and the administration charge payable to Ofcom, none of the costs identified by Ofcom have the types of cost drivers which would constitute a direct cost driver. It is imperative that Ofcom takes account of BT's response to the Consultation on the Review of BT's Cost attribution methodologies and reduces the starting charge adjustment accordingly. These issues are covered in more detail in BT's response to Ofcom's Consultation on the Review of BT's cost attribution methodologies of 12 June 2015.

237. The principle underpinning Ofcom's starting charge adjustment is to adjust for changes and errors in cost attributions which move costs from regulated to unregulated markets, to the extent they impact its forecast of costs in the 2013 LLCC (6.124). As outlined above, if the forecast cost in the 2013 LLCC was impacted by changes in Ofcom's modelling approach, for such changes a price glide should be adopted (6.120).
238. There are four elements in Ofcom's estimate of starting charge adjustments: Access Cards, General Overheads (see BT's separate response to Ofcom's Consultation on the Review of BT's cost attribution methodologies), 2013/14 RFS method changes and 2013/14 errors. The majority of the 2013/14 errors are not material and we do not comment on Ofcom's proposal in regard to them here.
239. The starting charges are a function of Ofcom's base year costs in the 2013 LLCC (2011/12 was the base year) and Ofcom's 2013 LLCC model. However, Ofcom estimates the impact of the changes on the starting charges with reference to 2013/14 costs (forecast forward to 2016/17). The Ethernet price is now and never was determined by Ofcom with reference to the 2013/14 costs or Ofcom's new 2015 LLCC model. Ofcom's approach therefore uses the wrong numbers in its calculations. BT considers the most accurate approach available is to use Ofcom's 2013 LLCC model to forecast the end year FAC after adjusting the 2011/12 LLCC base year data to account for the four identified factors. This approach has been adopted by BT and the new 'corrected' forecast is compared with Ofcom's original forecast to assess the extent to which the factors affected its cost forecast and thereby starting charges. It is important that Ofcom's modelling uses the correct numbers when estimating the impact of the four factors on the 2013 LLCC..
240. BT's assessment of the starting charge adjustment that should be made, based on a 'corrected' Ofcom forecast of 2013 LLCC costs and a consistent application of Ofcom's new rules is summarised in Table below as follows:

**Table 13 – corrected starting charge adjustments**

Category	Ofcom Modelling	BT correction	Reason for correction
a. Access cards	-2.59%	0.00%	Change in Ofcom modelling should be treated as a glide
b. 13/14 Method changes	-3.59%	-1.85%	Ofcom included costs that were not in 2013 LLCC forecast
c. General overheads	-2.88%	0.00%	Change in Ofcom policy should be treated as a glide
d. 13/14 errors	0.06%	0.06%	Immaterial, not analysed / corrected
Total	-9.00%	-1.79%	

### Access cards

241. In the 2013 LLCC, Ofcom assessed Access cards costs as being incremental to unregulated services. As a consequence, Ofcom removed direct Access cards costs (even though it assessed Access cards were used for downstream services) but actively decided not to remove indirect (unavoidable) Access cards costs from its 2013 LLCC costs forecast. To remove these indirect (unavoidable costs) now is clearly a change in Ofcom's modelling approach, which – according to Ofcom's own framework – means this should be achieved by means of the glide path. To do otherwise would render Ofcom's approach internally inconsistent. Therefore, there is no justification for including these costs in the starting charge adjustment.

## **2013/14 Method changes**

242. BT agrees that a proportion of the 2013/14 method changes are incremental to unregulated services. However, Ofcom has assumed that the impact of the 2013/14 was of the same order of magnitude in 2011/12 (the base year for its 2013 cost forecasts). BT has estimated the impact of these changes on 2011/12 costs (AISBO).
243. The analysis of the 2011/12 data, with the applicable methodologies applied, demonstrates that Ofcom overestimates the impact of subsequent 2013/14 methodology changes and we therefore consider Ofcom is incorrect in its estimate of the £25m starting charge adjustment. Ofcom's overestimate is a consequence of changes in the Ethernet and other access service volumes, the structure of BT businesses, and changes to methodologies that were not included in the scope of 2013/14 methodology report which Ofcom relied on to estimate this adjustment.<sup>36</sup>
244. We estimate that the impact of the changes within the 2013/14 methodology report, when correctly applied to 2011/12 costs, to be a maximum of £9m. This figure is itself overstated as we have not been able to definitively model the impact on indirectly allocated costs given the time allowed for this response. Our best off-line estimate is that if indirectly allocated costs were also taken into account, Ofcom's proposed £25m adjustment will reduce the impact on 2011/12 costs by a further £6m.
245. A definitive analysis of indirectly allocated costs in order to establish a definitive articulation of the cost impact in 2011/12 would require a full run of the ASPIRE or REFINE systems with 2011/12 data with the relevant methodology changes applied. BT plans to undertake this analysis in September/October 2015 and will share this with Ofcom when available.
246. In summary, BT considers Ofcom has made an error and views that this element of the starting charge adjustment should be reduced from 3.85% to a maximum of 1.85% subject to providing the more detailed cost attribution analysis referred to above.

## **General Overheads (Ofcom's proposals in the Consultation on the "Review of BT's Cost attribution methodologies")**

247. BT's objections in principle to Ofcom's approach in reattributing general overheads to unregulated services are laid out in BT's response to the Consultation on the Review of BT's Cost attribution methodologies. Therefore BT considers none of these adjustments should lead to an adjustment of any sort.
248. Notwithstanding BT's objections in principle, we none the less assessed what the impact of Ofcom's proposals would have been on its 2013 LLCC forecast and can show that when the Ofcom's proposed changes are applied to 2011/12 costs, rather than 2013/14 costs, Ofcom's estimate of the starting charge adjustment is overstated and must be reduced. This is because general overheads were a lower overall proportion of the relevant 2011/12 costs than they were of the 2013/14 costs.
249. Lastly, Ofcom used a proxy attribution method, based on Previously Allocated Costs ("PAC"), to estimate the impact of its general overheads proposals. Its stated intention is that for the Final Statement it will correct the proxy estimate by using the relevant cost drivers it proposes are better in the Consultation on the "Review of BT's Cost attribution methodologies" (Footnote

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<sup>36</sup> Ofcom's method for estimating these adjustments was discussed at a meeting on 9 July 2015 between BT and Ofcom. Ofcom confirmed the figures in the 2013/14 methodology report were used to estimate the adjustment without qualification.

202). The impact of applying the 'correct' cost drivers rather than "PAC" is almost certainly to reduce the general overheads portion of the starting charge adjustment further.

**Question 6.5: Do you agree with our proposals in relation to the value of X for Ethernet services. If not, what alternative would you propose and why?**

250. It was not possible in the time available to ascertain an accurate estimate of the impact on the proposed X should Ofcom take on board BT's proposals. However, in summary BT considers Ofcom should adjust its modelling to reflect the following:
- Adjust the Access Fibre AVE from 0.2 to 0.8 as per our response to Question 5.3.
  - Correct the error in Ofcom's modelling approach in the calculation of the holding losses over the duration of the charge control as per our response to Question 5.3.
  - Increase base year costs by £18.2m to account for the 2013/14 TI Error correction as per our response to Question 6.2.
  - Increase 18/19 costs by £3< to correctly account for increase service costs as per our response to Question 6.2.
  - Increase the cost forecast (and recovery of that cost) by £3< as per our response to Question 6.2.
  - Adjust Dark Fibre volumes upwards as per our response to Question 6.3.
  - Set the efficiency target at no more than 3.5% as per our response to Question 6.3.
  - Reduce the starting price adjustment from 9% to 1.79% as per our response to Question 6.4.
251. The lists of changes are likely to result in an X that is more than 4 percentage points lower.

### **3.7 Dark Fibre Pricing**

**Question 8.1: Do you agree with our proposals regarding Dark Fibre pricing? If not, what alternative would you propose and why?**

252. Ofcom proposes to impose a basis of charges condition requiring BT to ensure that charges for Dark Fibre services are set on the basis of BT's EAD 1Gbit/s products, minus LRIC of the active elements, and sets out guidance on how to calculate the active differential (paragraphs 8.23-8.87 of the LLCC Consultation). We set out below our comments on these proposals.
253. BT's wider comments on the introduction of a Dark Fibre remedy are set out in BT's response to the May 2015 BCMR Consultation, submitted to Ofcom on 31 July 2015. In that response, we describe our view that Ofcom has proposed an approach to pricing Dark Fibre which is not objectively justifiable. We believe that Ofcom's proposed approach is disproportionate and inappropriate.
254. Ofcom has designed a Dark Fibre remedy, which at the pricing of EAD 1Gbit/s minus, presents very large price arbitrage opportunities across the active product portfolio. Under Ofcom's proposed price and specification for the Dark Fibre product, we strongly believe that price arbitrage will be the main driver in Dark Fibre adoption – and not innovation, despite Ofcom's

stated intentions. Figure 7 below illustrates<sup>37</sup> for each product variant whether it would be commercially viable with Dark Fibre at August 2015 prices.<sup>38</sup> We conclude:

- ✂<sup>39</sup>
- At 1Gbit/s bandwidths, there is a significant arbitrage opportunity (marked in red in the graph at Figure 6 below) for all access product variants besides the plain EAD 1Gbit/s standard product, and EAD 1Gbit/s LA products. Legacy products WES/BES show significant price arbitrage opportunity.
- Even selected variants of 10/100Mbit/s products are subject to 1:1 substitution from Dark Fibre, in particular Extended Reach products.
- With prices for Dark Fibre due to reduce by more than 30% by 2017/18, the level of arbitrage opportunity would be even further increased.

**Figure 6 ✂**

✂

255. With this as background, BT's key points on the overall pricing approach<sup>40</sup> are:

- We would expect that, if a Dark Fibre remedy is to be imposed, any thorough assessment of the market cost and price for a Dark Fibre product would very likely indicate an appropriate price point considerably greater than that of "EAD 1Gbit/s minus". We do not believe that Ofcom's proposals are based on a thorough enough assessment of the negative implications of mandating Dark Fibre at the proposed entry price and on this basis we do not believe Ofcom can implement this proposed remedy with any confidence that the supposed "benefits" outweigh the likely "risks".
- Ofcom has not adequately considered alternatives and in particular, the alternative approach of setting the Dark Fibre price at a much higher level - for example at "EAD 10Gbit/s minus", or some form of market value pricing reflecting prevailing market prices where services may typically be provided at bandwidths of 10Gbit/s or greater. This higher price would likely have to be set and subsequently maintained at or above this level in real terms and set outside future regulatory prices for BT's active services but reflect the underlying costs of build of competitive infrastructure.
- Setting the Dark Fibre price at a much higher level, such as "EAD 10Gbit/s minus", would reduce initial volumes of take-up, compared to the likely take-up at Ofcom's proposed price level. However, we strongly believe Ofcom's current volume assumptions are significantly understated for the proposed "EAD 1Gbit/s minus" assumption. In particular,

<sup>37</sup> In this chart, we represent in blue the products where CPs would not have financial incentives to use Dark Fibre instead, and we mark in grey those products where it would be cheaper for a CP to choose Dark Fibre and build the active product themselves, when considering a three-year period. We represent in orange the costs of electronics and additional costs for a CP as efficient as Openreach, and in red the yearly value coming from arbitrage. We use LRIC differential estimates of £✂ and £✂ respectively for STD and LA versions of Dark Fibre, as per Ofcom's methodology to identify the differential.

<sup>38</sup> These prices incorporate the August 2015 price changes which led to a 38% reduction in Total Cost of ownership of EBD vs March 15 prices. Also, other 10G MISBO product rentals in the basket have been reduced by between 30% and 40%. ✂

<sup>39</sup> ✂

<sup>40</sup> The comments below should be read in conjunction with our response to the main BCMR Consultation Parts A and B and additionally noting the analysis set out by Dotecon in their report.

in today's competitive markets, as Ofcom itself has identified and quantified, Dark Fibre products are typically supplied and consumed for the purpose of carrying very high bandwidth services, a market segment in which Ofcom explicitly identifies that BT has very low market shares, well below the 40% threshold typically indicating significant market power.

- In response to Ofcom's statement in paragraph 8.1 of the LLCC Consultation, we consider that a much higher price would be less likely to distort competition because it would better align with current offerings from existing competitors in the market for provision of Dark Fibre services. At such a level, there would be a better prospect of a level playing field in this industry sector.
- Ofcom is mistaken when it considers, in paragraph 8.3 of the LLCC Consultation, that an "EAD 1Gbit/s minus" pricing mechanism would reduce risks of arbitrage opportunities. We have described in detail, in section 17 of our response to the BCMR consultation, some of the risks related to arbitrage based on density, bandwidth, and distance. We consider in particular that the risks related to density, and the opportunity for CPs to aggregate existing circuits onto a single Dark Fibre (or a single Dark Fibre pair – depending on the technology deployed), would result in significant opportunities for what Ofcom characterises as price "arbitrage" between active and passive services.
- Setting the Dark Fibre price at a higher level would have the benefit of mitigating or reducing many of the risks and issues which would arise from a Dark Fibre price set at "EAD 1Gbit/s minus", and that we have described in our response to the BCMR consultation, including:
  - Removal of incentives for Openreach and its competitors to invest in infrastructure build;
  - Removal of the bandwidth gradient at all bandwidths, leading eventually to a much reduced Openreach and industry-wide portfolio - effectively offering a choice of only 1Gbit/s or Dark Fibre services, which may not suit the needs of all customers;
  - A major decrease in Openreach and other infrastructure-based CPs revenues, over and above the impacts of the CPI-X controls on active product prices, with a significant risk of under-recovery against the Openreach cost base, in particular due to levels of aggregation and substitution of multiple active services to lower priced Dark Fibre products;
  - An increase in the volume of cases where it is not commercially viable for Openreach to provide new circuits, and hence an increase in the likelihood of cases where Openreach and its customer CPs are unable to meet demand to provide data connectivity to business customer sites; and
  - High levels of stranded Openreach assets from rapid adoption of Dark Fibre – with consequent upward pressure on product prices.

256. In section 8 of the LLCC Consultation, Ofcom focuses on the precise estimation of the proposed LRIC differential (the "minus" in the "EAD 1Gbit/s minus" mechanism). Our comments in the paragraphs below on this issue are made without prejudice to our view that, if a Dark Fibre product is to be mandated, and furthermore if the price is to be set with reference to an existing Openreach active product price, then Ofcom is wrong to choose as low a reference

product price as the EAD 1Gbit/s product. A much higher reference price would be needed, in recognition of the risks and likely arbitrage.

257. In this section, we do not propose to repeat our analysis leading to our view that an EAD 1Gbit/s price reference is too low. Instead, for this response we propose to focus on Ofcom's guidance on the implementation of Dark Fibre pricing, as defined by Ofcom in section 8 of the LLCC Consultation and corresponding draft SMP condition 5C of the legal instrument. In particular, the following paragraphs relate to the proposed method of calculation of the "minus", as well as Ofcom's other proposed guidance with respect to ECCs, and Dark Fibre.
258. We then go on to describe some of the impacts of the proposed Dark Fibre pricing regulation on the future of Openreach active product pricing, and the likely evolution of the Openreach business connectivity portfolio.

#### **Overall guidance on 'each and every charge'**

259. Ofcom's proposal requires BT's Dark Fibre prices to be set by reference to the prices of the two reference Ethernet products - specifically 1Gbit/s EAD and 1Gbit/s EAD Local Access (LA). The price of the proposed Dark Fibre service is required to reflect the LRIC difference between the Dark Fibre service and the corresponding 1Gbit/s EAD or 1Gbit/s EAD LA service. Ofcom refers to this as the 'active LRIC'.
260. Ofcom's guidance is that 'each and every charge' for a Dark Fibre service is reasonably derived from the charge for the corresponding 1Gbit/s EAD service or 1Gbit/s EAD LA service (as defined in the draft SMP condition 5C.1 of Annex 15 of the LLCC Consultation). This Ofcom proposal is entirely based on the key Ofcom assumption that there is 1:1 mapping between the use of individual Dark Fibre products, and the individual EAD services for which Dark Fibre would be a substitute; this is absolutely not the case.
261. The implications of Ofcom's proposal are:
- Ignoring the additional variants of EAD would likely undermine Ofcom's analysis of the impact of Dark Fibre on cost recovery overall by generating price arbitrage opportunities.   
✂ Should the Dark Fibre price reference be only linked to the standard version of EAD, it is clear that there would be significant price arbitrage opportunity for non-standard versions of EAD 1Gbit/s products, which we do not believe Ofcom has accounted for when considering the need for price rebalancing in Annex 12 of the LLCC Consultation.
  - There will be multiple Dark Fibre prices for the same connectivity service. For EAD 1Gbit/s there is more than one rental service for non-local access services. For example BT offers Extended Reach, Resilient RO1 and EAD Enable variants at a higher price than the standard service. Because the active LRIC for these and any other similar products may be different, the proposals as currently drafted would require BT to derive different Dark Fibre prices for exactly the same Dark Fibre non-local access variants.
  - Moreover, the above complexity is heightened because there are no reference products for potential Dark Fibre prices specifically in relation to ancillary products (for example migration products) that may be defined in future. Essentially imposing an "each and every charge" obligation which is referenced to a service which may not currently exist is disproportionate.
262. An alternative that would potentially simplify and improve certainty and stability in the pricing aspects of implementation of the Dark Fibre obligation may be to set the "reference price" at a

weighted average of the bundle of the standard and other variants. The active LRIC could then be based on the same bundle.

263. Ofcom assumes that the main link prices (and resilience charges) would be identical for EAD 1Gbit/s and Dark Fibre (i.e. a zero LRIC differential). We broadly agree that this approach might serve to minimise arbitrage. However, as we describe in section 17 of our BCMR response (submitted on 31 July 2015) a significant volume of opportunities will arise for distance-related arbitrage in the case of high-density backhaul routes.  $\times$ . We have no alternative Dark Fibre pricing mechanism to propose at this time to remove this risk. We observe that Ofcom has implicitly and explicitly forecast that absolutely no such substitution would occur. Clearly, Ofcom needs to correct such views – and read through an increased volume of forecast Dark Fibre take-up into its charge control proposals as well as into its risks and benefits analysis of the Dark Fibre remedy itself.

### Calculating the minus

264. We have analysed in detail Ofcom's approach to derive the costs to be included in the increment as detailed in paragraphs 8.29 to 8.71 of the LLCC Consultation. We set out the conclusions of this analysis in Annex A to this response.
265. In summary, our analysis leads to a different LRIC differential to that of Ofcom and we note the following differences:
- **Ethernet Electronics:** Ofcom excludes around  $\times$  of the costs of Ethernet Electronics in the RFS to reflect BT's changes in how it historically recovered the upfront costs of the electronics. The active LRIC calculation should reflect this reduction in the FAC which would reduce the active LRIC by around  $\times$ .
  - **Sales Product Management ("SPM"):** BT considers there should not be a reduction in SPM costs due to avoided equipment costs.
  - **Revenue Debtors:** Ofcom should take the same ratio of revenue debtor to price of  $\times$  to calculate the LRIC differential.
  - **Service Centres Assurance:** It is unclear why Ofcom has increased the percentage of faults avoided to 25%. In addition, when using the actual LRIC:FAC ratio of 84%, only  $\times$  of costs would be avoided. This would result in a  $\times$  adjustment  $\times$  compared to Ofcom's estimate, however further non trivial analysis is required on fault identification and understanding what the fault rates will be on Dark Fibre, and how often CPs will fail to identify an equipment fault. Ofcom should note that (as described in section 4 of our BCMR Consultation response) that there will likely be a high volume of Dark Fibre fault reports received by Openreach which will inevitably require high cost engineering visits to test and diagnose – including significant volumes where the fault is subsequently proved to be outside the Openreach Dark Fibre domain.
266. For 2018/19, these considerations lead to a LRIC differential that is ca.  $\times$  lower than that estimated by Ofcom in the LLCC Consultation initial methodology. BT estimates using Ofcom's methodology, and revising it to take account of the four points above, that the proposed LRIC differential is  $\times$  too high for the LA variant and  $\times$  too high for the standard variant. This is before correctly accounting for Dark Fibre implementation which we discuss further below.



**Table 14 – LRIC differential by year, using Ofcom's and the revised methodology**

Year	Ofcom's methodology		Revised methodology	
	DF Local Access	DF Standard	DF Local Access	DF Standard
2013/14	✂	✂	✂	✂
2014/15	✂	✂	✂	✂
2015/16	✂	✂	✂	✂
2016/17	✂	✂	✂	✂
2017/18	✂	✂	✂	✂
2018/19	✂	✂	✂	✂
OFCOM 2018/19 in June 2015 Consultation	£753	£790	n/a	n/a

### LRIC, LRIC+ and alternatives

267. In addition, we consider that, whether Ofcom's proposed methodology is used or the improved method we describe above, the LRIC difference does not necessarily provide the correct solution for mitigating arbitrage opportunities. Ultimately, Ofcom's intention is to create the conditions for CPs to purchase a Dark Fibre input to create their own active leased line solutions when it is efficient for them to do so (paragraph 8.10 of the LLCC Condition).
268. We recognise that using BT's costs rather than CPs' costs as the basis for this calculation would in theory maximise the productive efficiency (as stated in paragraph 8.12 of the LLCC Condition), i.e. that it would ensure that CPs with higher incremental active costs do not enter and continue to consume active products from Openreach, and conversely those with lower incremental costs than BT are incentivised to make use of the Dark Fibre remedy.
269. We agree with Ofcom that the pricing of Dark Fibre should avoid incentives to use Dark Fibre services purely because of price arbitrage opportunities (paragraph 8.16). On that basis BT considers that a LRIC+ approach is not appropriate or proportionate (paragraph 8.17).
270. Conversely, Ofcom has not considered a number of factors that could lead to adjusting the LRIC (a LRIC "minus" approach) to reflect additional long run costs to Openreach and further price arbitrage opportunities:
- LRIC aims to reflect as accurately as possible the incremental costs for the business, but naturally has its own limitations of accuracy and fluctuations can occur by product variant. More importantly, a LRIC based approach reflects costs for an average product. However in reality, arbitrage from CPs will occur for individual cases of product variants, and for the specific conditions where their own cost of building the active service from a Dark Fibre input is lower than that of Openreach, but will continue to buy active services from Openreach when their costs are higher.
  - We illustrate below the fact that a LRIC differential applied to a product blend does not fully reflect the risks of arbitrage. We explore the arbitrage opportunity presented on EAD 1Gbit/s standard, EAD 1Gbit/s LA and other EAD 1Gbit/s product variants, for a CP as efficient as Openreach. A CP is presented with the option to either buy the active circuit or buy the Dark Fibre input, incur electronics and set-up/additional running costs. In Figure 7 below we represent in blue the yearly total cost of ownership for an active

product, and in grey the Dark Fibre price. In red, we show the arbitrage opportunity for the CP as effective as Openreach. For an EAD 1Gbit/s standard, the marginal difference at 2015/16 prices is ca. £. But for an EAD 1Gbit/s Extended Reach, this difference is £.

**Figure 7**

£

271. A significant factor that Ofcom has not considered when proposing a LRIC differential is the resulting stranded assets costs in the transitory period for Openreach, which is effectively a counter balancing cost (£) of any supposed “benefit” that may arise from the introduction of the proposed Dark Fibre remedy. We set out our calculations leading to that total within section 17 of BT’s response to the BCMR consultation.
272. Additional arbitrage will occur from aggregation when a CP can substitute multiple circuits on the same route, with a single Dark Fibre. We have discussed in section 17 of our response to the BCMR consultation the risks of aggregation which could occur for up to £ of circuits belonging to a single CP.<sup>41</sup> In that case, the LRIC for a single service would not be a fair reflection of the arbitrage opportunity presented to the CP.
273. For these reasons, we consider that Ofcom's intention to identify a “minus” that fully reflects productive and dynamic efficiency has not been fully considered. In particular we consider Ofcom's approach fails to recognise a number of the opportunity costs which directly impact the opportunity for BT to recover its costs in the future.

#### **Differences between the Dark Fibre Reference Offer and the benchmark EAD services**

274. In addition, it is important that Openreach can be in a position to reflect the full extent of the costs that it will incur because of Dark Fibre, both fixed and incremental and that would underpin how the Dark Fibre reference offer differs from the benchmark EAD services.
275. Ofcom makes some provisions in paragraphs 8.72-8.74 for the differences that may arise between Dark Fibre and EAD services. We do not believe these to be fully reflected in the draft SMP condition 5C of the legal instrument.
276. Costs that may be incurred by Openreach could include:
- Increased volumes of engineering visits to test and diagnose reported faults within stretching target resolution timescales, due to CPs not identifying equipment fault before referring the fault to Openreach. Consequently, Openreach will need to have a larger workforce of testers for provision and migration that can perform the OTDR<sup>42</sup> tests, and they will need to be equipped with additional handheld test equipment. This will result in further costs in training;
  - Fixed costs incurred for the development and upgrades of the Dark Fibre product;
  - Further line test tools to enable efficient processing of fault reports received; and

<sup>41</sup> The analysis is based on the 2015/16 inventory of circuits, and this number is likely to grow given the rise of Ethernet volumes.

<sup>42</sup> Optical time-domain reflectometer, instrument used for testing.

- Deployment of a patch panel<sup>43</sup> as a clear point of demarcation between the Openreach Dark Fibre product and the CP domain to support efficient operations.

277. These fixed and incremental costs would only be understood on full completion of the design of the remedy, and after a period of piloting. We therefore would like to discuss further with Ofcom what the final guidance should be when determining the prices for Dark Fibre, in particular with respect to the specific costs incurred for this remedy as opposed to active products. It is likely that Openreach will have more robust estimates of implementation costs and operational costs available to share with Ofcom prior to Ofcom's final financial modelling in advance of the BCMR and LLCC Statements.

### **Compliance with the condition**

278. In the LLCC Consultation paragraph 8.25, Ofcom proposes that compliance should be assessed based on cost data that are available to BT at the point at which it sets its charges, namely for each year to the end of December. DLRIC cost data to end-December may either not have been produced within those timescales, or if available, such data would not have been sufficiently audited for use as the basis for setting prices.

279. In its legal instrument, Ofcom says '3 months after the relevant year' – this is three months after the 31 March each year (i.e. 30 June). However, the accounts (RFS) are not due to be published until 31 July every year. We may not have final versions of cost data in the accounts as at 30 June (and it will not have been audited or reviewed in detail at that point). This applies to items 5C.5 ii, iii, iv and possibly the other sub sections. We therefore do not think Ofcom's approach is practicable.

### **Services requiring two fibres**

280. Ofcom's proposal in relation to services requiring two fibres is set out in paragraphs 8.81-8.85 of the LLCC Consultation. Ofcom proposes the following approach:

- The price of a fibre would be doubled for the provision of two fibres"; and
- *"This initial price is then adjusted for any incremental cost savings to BT associated with supplying multiple fibres".*

281. We consider that in selling a fibre pair as opposed to a single fibre, BT would expect that some of the costs may be avoided in sales & product management, service centres – assurance, and revenue debtors. Our estimate based on 13/14 RFS is that this would lead to a reduction of  $\pounds$  on the LRIC differential for the second fibre. Overall, this would result in the price for two fibres being close to double that of a single fibre. We would like to seek confirmation from Ofcom of what is included in the specification of the costs avoided in providing a Dark Fibre service requiring two fibres.

282. Setting the price for two fibres close to that of two single fibres will reduce the extent to which CPs might seek to use multiple fibres for different active circuits, for each of which Ofcom's charge control calculations assume that the CP would have paid for in full.

283. We understand that current market prices for comparable Dark Fibre services (whether on-net or off-net) present a much higher price than a single "EAD 1Gbit/s minus" per fibre, and reflect the fact that Dark Fibre is typically used as a substitute for very high bandwidth services. This

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<sup>43</sup> A single 12-fibre patch panel equipment can cost  $\pounds$  to be spread across a number of circuits.

further promotes the notion that services requiring two fibres should be priced very near that of two distinct fibres. We also discuss this issue at Section 17 in Part B of our response to the BCMR.

284. Moreover, whilst single fibre working is common practice for Ethernet based services such as EAD, WDM based systems that carry multiple wavelengths (CWDM or DWDM) have tended to use a fibre pair. With the fibre pair, multiple wavelengths were combined together and transmitted on one fibre and the incoming signals were received on the other. There are existing and emerging technologies where vendors are offering single fibre working WDM optics which utilise single fibre working. While this may compromise the total number of wavelengths that are able to be transmitted by a CP, Openreach's view is that CPs will consider the cost/benefits of single fibre work WDM optics over using the traditional fibre pair for transmission purposes.

#### **Provisioning, repair and migration charges**

285. Ofcom indicates in paragraph 8.76 that it considers BT should set the charge for migration to reflect the long run incremental costs of any objectively justifiable differences associated with migrating to Dark Fibre products rather than to active products.
286. We would expect that this will need to be further defined in the reference offer. However, we consider that costs would need to be fully inclusive of all consequences to BT of the migration. One key consideration will be the existing kit recovery or disposal, and the overall cost of stranded assets. Moreover, Openreach's view is that further opportunity costs, e.g. such as the fact that a customer will never buy any other circuits from BT on that route once they have migrated, should not be ignored and they should be reflected in the cost of migration or other costs considered.

#### **Excess Construction Costs (ECCs)**

287. Ofcom's proposal in relation to ECCs is set out in paragraphs 8.77-8.79 of the LLCC Consultation. ECCs are currently averaged to a fixed fee on connection for EAD, with the exception of RO1 journeys.
288. With respect to paragraph 8.77, we agree that Dark Fibre's specific charges for individual items billed when performing ECC work should be the same. Therefore, that fibre work should be charged at the same rate for both active and passive work.
289. As per paragraph 8.78, we continue to think that there is a risk that CPs would game the ECC exemption condition and find arbitrage opportunities between self-build and Dark Fibre. Indeed, Dark Fibre may prove to be more relevant for specific use cases, e.g. replacement of high bandwidth products, and therefore using an averaged fixed fee could lead to significant losses for BT.
290. Assuming that the data would be available – which would need to be considered in due time – we consider that, if BT were to offer the exemption rule for Dark Fibre, Ofcom should allow it to compute the threshold and balancing charges required for Dark Fibre, and at the very least validate that these are similar to those observed for active circuits, before enforcing that they should be the same.
291. In addition, paragraph 8.79 states that BT has the flexibility to withdraw the exemption, or to limit which circuits the exemption applies to. We would like to clarify with Ofcom whether it means that BT has the option to not include the ECC exemption for Dark Fibre, while

maintaining it for active products. Initially, this would help BT and Ofcom understand more the profile of usage of Dark Fibre, before introducing an exemption that can distort take-up and cost recovery. We would like to seek confirmation from Ofcom on how to interpret paragraph 8.79.

### **Impact of Dark Fibre pricing on actives**

292. While we have considered a number of the risks and effects at today's prices, the CPI-X glide path presented for Dark Fibre could have significant and as yet unknown consequences on the active products. We present a typical possible glide path for total cost of ownership over three years given the draft charge control conditions.

**Figure 8 – Three year Total Cost of Ownership for a CP of EAD 1Gbit/s Standard vs Dark Fibre<sup>44</sup>**

✂

293. ✂

294. We would potentially be in a position where EAD 100Mbit/s may no longer be attractive, and quite possibly may become difficult to sustain commercially, with prices that are not relevant compared to 1Gbit/s. With prices going down rapidly on EAD 1Gbit/s, there would be little value for customers to take 100Mbit/s products. This may seem positive in terms of getting the market to use higher bandwidths, but 100Mbit/s is where the bulk of the market is today. The end result is likely to be lower overall demand to build out fibre network for business connectivity products – as a direct consequence of Ofcom's Dark Fibre proposals, and therefore higher average costs for circuits which will need to be passed onto customers.

295. Moreover, there will be implications of Dark Fibre pricing on the WES/BES portfolio. Because Dark Fibre is proposed to be significantly cheaper than WES/BES 1Gbit/s, BT may have to decrease WES/BES prices to preserve its commercial interests. This is sub-optimal for a number of reasons, in particular:

- We have traditionally aimed to maintain comparatively short payback periods (well below 12 months) for CPs to migrate between WES/BES and EAD. This may no longer be optimal and therefore will reduce incentives for customers to move away from products that will no longer be supported from 2018.
- In the past, BT has focused on reductions that stimulate the market and create the context for growth of cheaper connectivity in the UK. The resulting reductions in WES/BES prices would not have such an impact.

### **3.8 Proposed controls for Accommodation, Excess Construction and Time Related Charges**

**Question 9.1: Do you agree with our proposals for charge controls for accommodation? If not, what alternative would you propose and why?**

296. In summary Ofcom proposes:

- "...to treat the Ethernet and TI accommodation products that overlap with LLU Co-Mingling products the same as the LLU Co-Mingling products. The 2014 June FAMR Statement's charge control for the Co-Mingling (New Provides and Rentals) basket will continue to apply

<sup>44</sup> excluding electronics.

regardless of whether they are used by CPs for leased line products or for LLU. For the two services that fall outside of the regulation above, Access Locate and Cablelink, we propose a price cap of CPI-0%.”(paragraph 9.3)

- “Access Locate and LLU Co-mingling services are currently charged at the same price. This is because a number of overlapping Ethernet and TI accommodation products are currently treated the same as LLU Co-Mingling products and regulated by the charge control in the June 2014 FAMR Statement. This states that the Co-Mingling (New Provides and Rentals) basket will continue to apply regardless of whether the accommodation products are used by CPs for leased line products or for LLU.”(paragraph 9.9)
  - “We propose to adopt a similar approach as the March 2013 BCMR Statement, which seeks to avoid the undesirable situation where these overlapping products would be subject to two different charge controls. As such, we do not propose to place any additional price control on these overlapping products; instead, we will require Openreach to price accommodation products used for leased lines the same as for when used for LLU Co-Mingling.” (paragraph 9.10)
297. We agree with Ofcom’s proposals set out in paragraphs 9.3, 9.9 and 9.10 of the Consultation and in particular, that the 2014 June FAMR statement’s charge control for the Co-Mingling New Provide and Rental Services basket should continue to apply, regardless of whether the accommodation products are used by CPs for leased line products or for LLU and that no additional price control on overlapping products should be introduced.
298. We agree with Ofcom’s proposal to use a CPI-0% price cap control for Access Locate Administration Fee, and for Cablelink, and thus to maintain the principles of the control currently in place (paragraph 9.11 of the LLCC Consultation).
299. We agree with Ofcom that the proposed controls enable BT to recover costs and make any necessary small adjustments reflecting increase in costs to existing pricing for both Cablelink and Access Locate administration fee (paragraphs 9.12, 9.13 and 9.14 of the LLCC Consultation).
300. Our comments on the proposed legal instruments to implement Ofcom’s proposals are included in our response to Question 10.1 below. In summary:
- We agree with draft SMP conditions 5E.1, 5E.2 and 5E.3 which set out the principles for accommodation services and overlapping accommodation services.
  - For increased clarity, we propose that Ofcom stipulates in the Annex to draft SMP condition 5E – section 1, that Access locate charges also exclude the overlapping services, or alternatively that Access Locate charges referred to for this condition are the bulk (base administration and per PoP transfer charges) and singleton licence conversion from RANF to Access Locate Licence Administration charge on the Openreach price list link referred to in footnote 78.
  - We agree that the definition of overlapping accommodation services should currently be as per the June 2014 Fixed Access Market Review, and would draw Ofcom’s attention to the fact that this definition could possibly be different in 17/18 when the current FAMR control period ends and new controls are introduced.

**Question 9.2: Do you agree with our proposals for charge controls for ECCs? Please explain your answer with supporting information.**

301. Ofcom proposes that BT should be given flexibility to change the balancing charge of £548, but not the threshold charge of £2800 throughout the control period, so that the threshold charge will remain fixed at £2800 (paragraph 9.43 of the LLCC Consultation).
302. Our key points on Ofcom's proposals for Excess Construction Charges (ECCs) are set out below. In summary:
- We agree with retaining the flexibility to withdraw the £2,800 exception at any time (and correspondingly lower the connection price);
  - We agree with retaining BT's flexibility to change the balancing charge of £548;
  - We disagree with Ofcom's proposal to fix the threshold charge at £2,800 throughout the control period. We feel it would be more appropriate to have the flexibility to change the exception threshold as ECC costs or circuit demand change over time. Moreover, if there was a material shift in ECC costs and / or circuit demand patterns, then BT would like the flexibility to set a revised exception threshold and balancing charge to address such shifts in costs and / or demand;
  - We agree with Ofcom's proposals for charge controls for direct ECCs;
  - We disagree that GCBI is the appropriate index in relation to Contractor ECCs, since third party contractor's costs have increased beyond GCBI as the contract term expired (paragraph 9.35 of the June 2015 LLCC Consultation);
  - We agree that ECCs should be treated as a separate component of the connection charge (so that any increase in ECCs charged as a proportion of the fixed connection cost is not offset by an equal reduction in the overall connection cost, since this does not permit recovery of higher costs as above).
303. We make some more detailed comments below.
304. Openreach's external contractor costs are set to £. Since this is principally labour driven, it is likely to continue to increase in line with market rates. This is further complicated by geographic variances in cost that have been introduced, which will underpin a higher national weighted average cost. Scottish regions, for example, will incur costs of £ higher than in the English regions with a weighted average of £. In addition, Traffic Management Act ("TMA") costs will become additional costs incurred in the execution of Excess Construction duties.

305. £

**Figure 9 -£**

£

306. £.<sup>45</sup>

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<sup>45</sup> £

307. ✂

**Table 15– Increase in CT rates**

✂

308. This represents an average loss of £✂<sup>46</sup> in contractor costs per job based on ECCs in addition to the reduction in price of Direct ECCs of £✂.<sup>47</sup>
309. In addition to the above ✂, there are also additional charges Openreach is liable for in respect of TMA costs, which were previously included within the CT rates but which Openreach will experience on a bespoke basis per job. Moreover, the weighted national average price is subject to fluctuation since the costs will depend upon where the circuits are installed, increasing uncertainty regarding costs. ✂
310. Ofcom's pricing proposals for ECCs is essentially a regime to pass through the costs Openreach incurs to provide these services. The purpose of the charge control on the flat rate charge is to ensure BT passes through the correct amount of costs to CPs, rather than to promote and maintain productive and investment incentives.<sup>48</sup>
311. The GBCI index does not capture the expected input cost increases that Openreach faces. In an environment of such uncertainty over future costs, the proposal to impose a control on the flat rate charge at GBCI-0% and set the exemption threshold at £2,800 for the period of the charge control will ensure Openreach does not have the opportunity to recover its costs, and is thus inappropriate.
312. The aim of the flat rate charge and exemption threshold is to provide certainty for the greatest practical number of customers on connection price whilst ensuring BT has the opportunity to recover its costs. In the circumstances, the best way to preserve certainty for the vast majority of customers would be to preserve the level of the fix charge and allow the exemption level to be flexed in response to changes in input costs. We propose the exemption level is reviewed and adjusted appropriately on a yearly basis.
313. We consider it would be more practicable and desirable from a CP's perspective to flex the £2,800 exception threshold down or up, as this would impact a smaller proportion of circuit orders, in terms of the exposure to ECCs above the exemption value.
314. Having said that, if the ratio between the amount of ECC charge included in the connection price (currently £548) and the amount of ECCs exempted (currently £2,800) become disproportionate to be able to provide certainty to the vast majority of customers, Openreach would need the flexibility to reset both the balancing charge and the exception threshold.

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<sup>46</sup> Based on actual data from April 2015 to June 2015.

<sup>47</sup> Based on actual data from April 2015 to June 2015 and proposed charge control rates.

<sup>48</sup> BCMR Leased Lines charge controls and dark fibre pricing, para 9.4.



315. Based on FY 2014/15 volumes and new CT prices, we estimate that we would need to increase our ECC charges  $\times\%$  overall to recover costs. An  $\times\%$  increase in costs to Openreach would trigger the need to do one of the following:
- A reduction in the exception threshold from £2,800 to £ $\times$  to remain in balance with the £548 balancing charge, giving ECC certainty on 86% of orders after cost increases;
  - A  $\times\%$  increase in the balancing charge of £548 to £ $\times$  to maintain an ECC exception threshold of £2,800 affecting 100% of orders, giving ECC certainty on 89% of orders after cost increases; or
  - A resetting of the exception threshold from £2,800 to £ $\times$  and an increase in the balancing charge to £ $\times$  to maintain the 2014/15 ECC coverage on 92% of orders.
316. Openreach therefore needs to be able to amend the amount charged within the connection fee (the balancing charge) and the amount of the ECCs exception threshold, subject to the standard review and notification periods.
317. At the time of setting the exception threshold at £2,800, the incidence and level of ECCs had been relatively stable over a period of three years (2011/12 to 2013/14) and LLCC Conditions, SMP Condition 5.2 of the Direction was amended accordingly. However, given the unstable and unpredictable nature of the costs, it would be inappropriate to set charges for the entire three-year control period given the primary purpose of Ofcom's pricing approach is ensuring the correct amount of costs are passed through to CPs.
318. Openreach agrees that ECCs be treated separately from the remainder of the connection charges i.e. the connection price then considered for compliance on its own right excluding the ECC component. The amount of ECCs charged within the connection fee may then be added to the connection fee charge controlled by the basket to give an overall connection price.
319. As outlined above the ECC charge control should not use the GCBI index, which has diverged from the true rate of pay inflation over the last two years. A more relevant index would be the Tender Price Index ("TPI"). The TPI is a reflection of what market rates actually are and factors geography when it measures the Movement of Prices in Tenders for Building Contracts. The Construction Products Association ("CPA") forecasts for industry cost inflation of 4.8% in 2015 and Gardiner & Theobald states that 2015 will see further increases in tender price inflation as demand for construction continues to outstrip supply across the UK.
320. For compliance purposes, we therefore propose to base ECC charges on prior year weighted averages, which account for geographical splits and type of ECC by soft, footway and carriageway. This offers the opportunity to provide pricing certainty to CPs over each year whilst meeting the primary purpose of the price regulation; passing through the cash costs incurred in ECCs.

***Question 9.3: Do you agree with our proposals for charge controls for TRCs? If not, what alternative would you propose and why?***

321. Ofcom proposes that Ethernet TRCs should be set at the same level as copper TRCs. They will also be indexed by +0.2% per year, consistent with the June 2014 FAMR Statement (paragraph 9.59 of the June 2015 LLCC Consultation). BT disagrees with this proposal.
322. When assessing whether to price control TRCs in the 2014 FAMR the key question Ofcom posed was " ... whether suppliers other than BT (via Openreach) can supply equivalent

economic TRC or SFI services, in a way which exerts a significant competitive constraint on the TRC and SFI services supplied by Openreach.” (18.31 FAMR 2014). Ofcom assessed the constraints that existed were not a sufficient competitive constraint and therefore imposed a charge control.

323. In the LLCC Consultation Ofcom performs no market analysis (of the competitive nature of TRCs for Ethernet) implicitly assuming the TRCs for Ethernet and TRCs for LLU/WLR are the same and that the only question is whether the charges are reflective of costs.
324. In the LLCC Consultation Ofcom says “We considered further our approach to regulating TRCs in the June 2014 FAMR Statement, and concluded that in light of the evidence available, BT was earning revenues in excess of costs for TRCs, and as a result consumers were experiencing harm.” (9.49 LLCC Consultation). Ofcom then goes on to say that “In the absence of suitable [cost] data, we have no evidence to support different TRC charges to those adopted in the June 2014 FAMR Statement. We have also taken into account that prior to the reductions imposed in that statement, charges for TRC services were the same for copper and Ethernet TRCs.” (9.58 LLCC Consultation)
325. BT considers Ethernet TRCs to be very different from LLU/WLR TRCs in that most are highly contestable. BT therefore disagrees that there are strong enough grounds to regulate prices.
326. Furthermore, if Ofcom does not accept that the competitive constraints on Ethernet TRCs prices are much stronger than on LLU/WLR TRCs it must consider very apparent differences in the cost of these services. The same pricing approach as WLR/LLU TRCs should not apply.
327. For these reasons BT disagrees with Ofcom’s proposals to (1) control Ethernet TRC prices and (2) apply the same pricing as for LLU/WLR TRCs.
328. Key market differences between Ethernet and LLU/WLR TRCs.
  - $\propto$  of all Ethernet repair visits are driven by non-Openreach faults, i.e. faults on customer kit or customer premise. The equivalent figure for LLU/WLR is much smaller.
  - All tests carried by Openreach Ethernet engineer to clear a Non-Openreach fault are 100% replicable by a third party and not proprietary to Openreach. Ofcom found for WLR and LLU TRCs that the majority of TRCs required an Openreach engineer.
  - Ethernet response time is 5 hours. This is better than CPs are typically able to get from alternative suppliers, so there is a clear advantage for them to demonstrate they are acting on their customer’s fault rapidly, to engage an Openreach engineer.
  - In 2013/14 only  $\propto$ % of the remote tests with initial ‘Pass’ result were closed as Openreach faults,  $\propto$  faults in total. Across all EAD faults, these represent  $\propto$ % of the work stack in 2013/14. A reduction of the visit charge would remove the incentive for CPs to invest in upgrading their own diagnostics to avoid the productive inefficiencies these figures imply.
  - reputable third party engineering service organisations are typically  $\propto$ % more expensive on their hourly rates than Openreach’s TRC rates, thereby incentivising CPs to raise a fault with Openreach, since they get a rapid response and lower priced service than via other organisations.
329. Key cost differences between Ethernet and LLU/WLR TRCs.

- WLR/LLU TRCs also use a lower average grade of engineer than that used on Ethernet TRCs.
- There are higher overheads in processing Ethernet responses than there are for WLR/LLU responses (the work is more complex). In particular, increased manual intervention is required to process Ethernet orders as compared to copper. For instance there is the overhead of the Ethernet Repair Analyst team and the Work Allocation team. The Analyst team would typically spend 30 on the job before the engineer(s) gets despatched. Given the very rapid response time (5 hours) and the specialised nature of the engineering resources there is less scope for operational economies than there is in WLR and LLU.

330. Moreover, similar to what we have explained within our response to Condition 5A.10, we disagree with the principle of Deficiency and Excess proposed for ECCs.

### 3.9 Implementation of the new charge controls and compliance

***Question 10.1: Do you agree with our proposals for implementation of the proposed new charge controls and for ensuring compliance with the proposed new charge controls. If not, what alternative would you propose and why?***

331. In our response to this question we comment on the draft SMP conditions in Annex 15 with a view to assess Ofcom's proposals for implementation of the proposed new charge controls and for ensuring compliance with the proposed new charge controls, in particular, as to whether these proposals are objectively justifiable and proportionate in relation to what they are intended to achieve.

332. For the sake of clarity, the structure of our response follows the structure of Ofcom's proposals in Annex 15, and covers the following key issues within Section 10 of the LLCC Consultation:

- The charge control formulae applied to baskets and sub-baskets
- Carrying over price reductions in excess of the requirements and Excess Revenues
- Sub-cap controls
- Basis of charges obligation in relation to EAD and EAD LA
- General to the controls in the First Relevant Year
- Term products and discounts
- Accrued revenue
- Flexibility to deal with any changes in the services offered by BT
- Compliance monitoring
- Controls of safeguard cap for Very High CISBO services
- Basis of charges of obligation in relation to the Dark Fibre services
- Accommodation services

- ECC services
- Time Related Charges

333. Please note that we do not reiterate in response to this Question 10, our comments on the substance of Ofcom's proposals, which we have discussed in response to other questions above. Our response to this question focuses on the practicalities and suitability of the implementation approach set out in Section 10 and the draft SMP conditions set out in Annex 15 of the LLCC Consultation.

### **Draft SMP condition 5A: Controls of the Ethernet Services Basket**

#### **Draft SMP conditions 5A.1-5A.10**

##### Basket and Sub-basket controls

334. We agree with the formulae set out in draft SMP conditions 5A.2 and 5A.6 for the purpose of charge controls of Ethernet services at bandwidths up to and including 1Gbit/s within the wholesale markets for CISBO in the London Periphery and the Rest of UK. These formulae represent an appropriate approach to calculate a percentage change. We believe the use of a single formula for percentage change, as per the approach in FAMR, is an improvement on the current Ethernet charge control.
335. The proposed formulae for  $\overline{p_{i,t}}$  and  $\overline{p_{i,t-1}}$  in draft SMP condition 5A.6, appropriately reflect that the price difference should be calculated on the basis of weighted averages.
336. We agree with the use of CPI for the 12 months prior to 30 September of the year (as per paragraph 10.10 of the LLCC Consultation).

##### **Weighted average charge**

337. We agree with Ofcom's intention to design the charge control formula so that it takes into account the timing of any changes BT makes (paragraph 10.12 of the LLCC Consultation).
338. In draft SMP condition 5A.6,  $w_{i,j,t}$  and  $w_{i,j,t-1}$  are correctly defined as "*the proportions of the Relevant Year in which a distinct charge is in effect*". However the statement that "it is calculated by the number of days during which the charge is in effect and dividing by (i) for the First Relevant Year, by 364 (ii) for the Second Relevant Year, by 365; and (iii) for the Third Relevant Year, by 365" applies to the definition of  $w_{i,j,t}$  and not of  $p_{i,j,t}$ . We believe this should be corrected in the Final Statement.

##### **Carrying over price reductions in excess of the requirements**

339. Draft SMP condition 5A.9 appropriately calculates the new controlling percentage for each of the baskets, and appropriately reflects any excess or deficiency. It is an improvement on the current charge control.
340. We consider the carry-over needs to be calculated for each and every basket (i) Ethernet, (ii) interconnection, (iii) 1Gbit/s EAD, (iv) Main Link. This will allow for significant reductions to be implemented in a given year, while avoiding the need for BT to over-discharge significantly by the end of the control period. This carry-over formula is beneficial to customers as it enables additional price reductions to be performed earlier in the charge control period. Without this

carry-over formula, BT may be incentivised to make the minimum reductions required in each basket because the same reductions will need to apply in the subsequent years. Also, given the size of the reductions year on year (more than 20% in first year, and 13% in following years), we consider it is essential to ensure the formulae allow BT to carry-over any price reductions it makes in excess of the requirements of the charge control for that year.

341. This is dealt with in paragraphs 10.30-10.32 of the LLCC Consultation. In paragraph 10.31 Ofcom indicates that it is "*not proposing to apply those carry-over provisions for the sub-baskets within the main baskets*", in the case where BT's average charge is higher than the required level.
342. We would like Ofcom to clarify its proposals and to confirm that it is allowing for carry-overs for each basket in the case where price reductions are larger than expected, and that these carry-overs are calculated for each of the 4 baskets (i) Ethernet, (ii) interconnection, (iii) 1Gbit/s EAD, (iv) Main Link.

### **Excess Revenue**

343. Draft SMP condition 5A.10 (and footnote 389 of the LLCC Consultation) addresses the case of excess revenue. We have expressed concerns with Ofcom that it would not be reasonably possible and / or practicable for BT to repay the affected CPs any excess revenue BT earns.
344. While this clause is similar to that introduced in FAMR, it would be particularly difficult to comply with such a condition in the context of Ethernet where there is a wide range of products and broad possibilities as to what the revenues would have been should the discharge of prices be done differently, compounded by the large number of CPs that could be affected.
345. In a basket control it is impossible to say what products in the basket would be subject to price changes that should or would have been implemented in order to comply. Consequently, it is impossible to determine which CPs have been subject to excess charges and therefore how the Excess Revenues rebate is split across CPs. Moreover, any decision made by Openreach on the allocation of the rebates to CPs would be open to challenge.
346. BT will always make every effort to avoid a situation of Excess. In the exceptional cases where Excess occurs, costs of identifying which CPs to repay, and processing individual billing adjustments, would likely far exceed the small amounts of Excess.
347. This may result in BT aiming to discharge more than is required by a comfortable margin to avoid this situation (i.e. aim for "Deficiency" as per draft SMP condition 5A.8) every year, and as we understand given the CPt definition, for each and every basket.
348. Moreover, draft SMP condition 5A.9 already provides a suitable approach for corrective actions in the highly unlikely case of "Excess". As draft SMP condition 5A.9 provides sufficient protection to customers, and as draft SMP condition 5A.10 would be complex and costly to comply with, draft SMP condition 5A.10 is not objectively justifiable and is disproportionate in relation to what it is intended to achieve. We would therefore ask Ofcom that it is not included in the Final Statement.

### **Draft SMP conditions 5A.11-5A.12**

#### Sub-caps control

349. We broadly agree with the formulae in draft SMP conditions 5A.11 and 5A.12 for sub-caps control. We note however that there could be issues arising from the combination of the use of weighted average of price and inclusion of time limited discounts for this formula.
350. Because draft SMP condition 5A.15 indicates that for the purpose of condition 5A, time limited discounts are included, there could be a case where a product which has had a time limited discount in the prior year, with charges returning to their normal rates in the current year, would not meet the sub-cap control. We do not believe it is Ofcom's intention that this would be the case.
351. For instance  $\propto$ , we would find the condition  $C_t = (p_t - p_{t-1}) / p_{t-1}$  would not hold, because  $p_{t-1}$  is the weighted average including time limited discounts.
352. This situation can be avoided by introducing the alternative control in draft SMP condition 5A.12:

$$C_t = \frac{MAX(p_{t,1}, p_{t,2}, \dots, p_{t,n}) - MAX(p_{t-1,1}, p_{t-1,2}, \dots, p_{t-1,m})}{MAX(p_{t-1,1}, p_{t-1,2}, \dots, p_{t-1,m})}$$

Where  $MAX(p_{t,1}, p_{t,2}, \dots, p_{t,n})$  is the maximum of all price instances  $p_{t,j}$  the given service has been offered in the year  $t$ , excluding for any time limited discount.

353. This would achieve the purpose intended by Ofcom, while resolving the unwarranted consequences explained above.

#### Applying Sub-cap controls to Total Cost of Ownership ("TCO") of connection, rental and main link

354. With a CPI-13.75% and a 9% starting charge adjustment, prices of rental and main link will be reducing sharply. In this context, payback time for a circuit will increase rapidly. BT would like the flexibility to rebalance connection charges so as to maintain payback time within  $\propto$ .
355. For connection, rental and main link charges, we propose that the sub-cap control applies to the total cost of ownership represented by:

$$1\text{-Yr TCO}_t (\text{Connection}_t + 1\text{-year Rental}_t + 1\text{-year Main Link}_t) \leq 1\text{-Yr TCO}_{t-1} (\text{Connection}_{t-1} + 1\text{-year Rental}_{t-1} + 1\text{-year Main Link}_{t-1})$$

Example: EAD100M standard

356. At 15/16 prices, EAD100M Standard with a 5km main link shows  $\propto$  payback period. We consider 4 scenarios that comply with Ofcom's proposal of reductions (i.e. they deliver the required CPI-13.75% and 9% starting charge adjustment). By 18/19, in all scenarios, the payback time rises to at least  $\propto$  and up to  $\propto$ .
357. We then compare to a simple scenario where we are able to rebalance the connection charge slightly every year, to compensate for sharper reductions in charges on rental and main link, thus maintaining payback time within  $\propto$ . In that scenario, the TCO has reduced year on year, because of sharper decrease against main link and rental, but the payback remains about  $\propto$ .

#### **Table 16 $\propto$**

$\propto$

358. As per the table below, it should be noted that the 1-year TCO does reduce year on year in this example, thus a TCO sub-cap condition would be met.

**Table 17 ✕**

✕

359. With Ofcom's proposal to introduce separately 3-year term products, those CPs that are price sensitive to connection charges can spread the connection costs over the 3 years, thus a sub-cap on TCO would not harm them. This approach would protect BT against arbitrage opportunities for CPs that need a circuit for a short duration ✕ where BT would be making losses.
360. As opposed to the main charges of connection, rental and main link, which should be considered together as part of a single cost of owning the product, we recognise the need to provide certainty to customers against rises in charges for ancillary services (ceases, migrations, upgrade, resilience, etc.) relating to Ethernet up to 1Gbit/s bandwidth. We therefore accept that a cap on individual charges is the right control for ancillary services.

**Draft SMP condition 5A.13**

Basis of charges obligation in relation to EAD and EAD LA

361. We explained in response to question 6.1 why BT considers a basis of charges obligation in relation to EAD and EAD LA is unnecessary, risks creating significant distortions, and reduces any price flexibility. We focus here on discussing Ofcom's proposal as set out in draft SMP condition 5A.13, should Ofcom decide that a basis of charges obligation is required.
362. If such a condition existed, we consider that the condition should be written as a single test reflecting the total cost of ownership over either 1 year (given the minimum terms offered to customers) or 3 years (reflecting a typical term a CP will hold a circuit), and including connection and rental.
363. We propose below a practical approach with a test on 1 year TCO to clarify how we would propose to "reasonably derive" the price of EAD STD from the charge of EAD LA by taking into account the long run incremental costs.
364. We explained in response to question 6.1 and in Annex C that we see DLRIC as only one of the parameters reflecting costs for a service. The wider range covered by DLRIC, FAC and DSAC and the relative positioning of product charges within those ranges provides a more accurate comparison of price positioning vs costs.
365. For instance, our rental charges for 100M STD are already £101 below FAC13/14 and a straight application of the LRIC difference between LA and STD would further aggravate the situation:

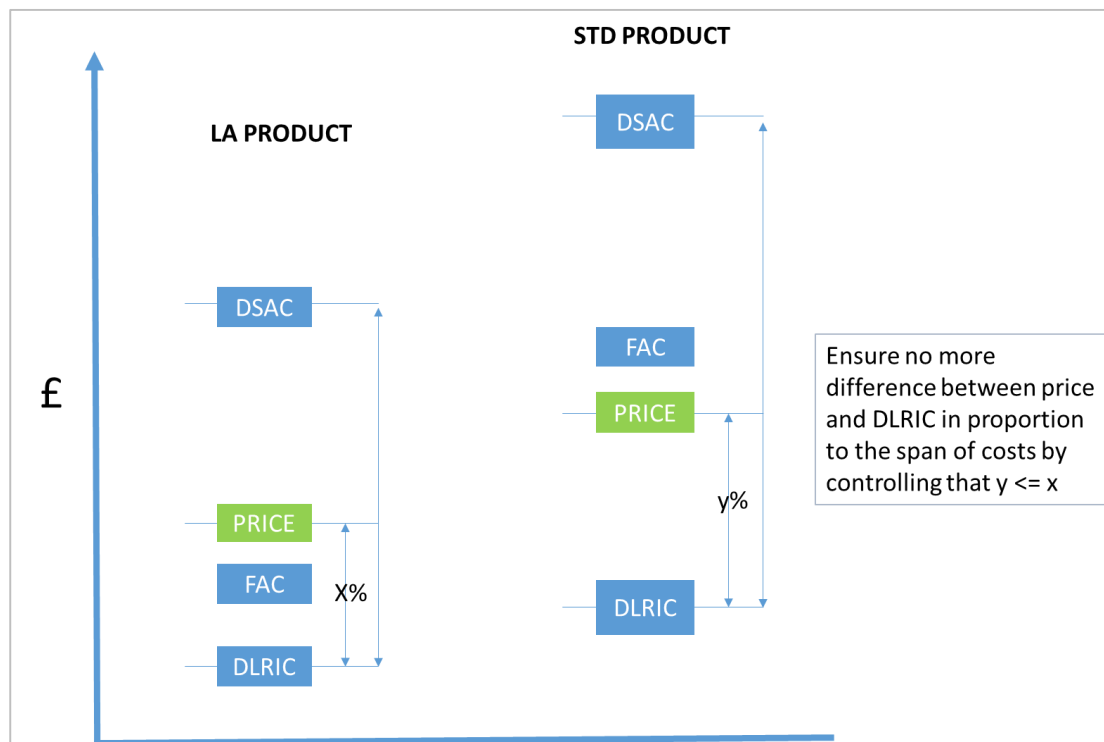
**Table 18 – EAD Other mark-up on FAC with Ofcom's proposed basis of charge condition**

	<b>EAD LA 100Mbit/s</b>	<b>EAD Other 100Mbit/s</b>
Average Price (£)	2,113	3,008
FAC (£)	2,099	3,109
DLRIC (£)	✕	✕
Mark-up over FAC (£)		-101

New Price based on Ofcom approach for EAD Other 100Mbit/s (£)		✂
New Mark-up over FAC (£)		✂

366. Based on 13/14 RFS numbers, which Ofcom has used as basis for its draft SMP condition, we observe that EAD100M STD price would fall £✂, if BT was to implement Ofcom's proposed condition as we understand it.
367. Basing on 14/15 RFS numbers would make the situation even worse, by pricing "EAD other" at ✂, which would be ✂.
368. Openreach is expected to make a fair return on its capital employed and therefore should be allowed the flexibility to set the price above FAC as opposed to ✂. We therefore believe this example illustrates that Ofcom's proposed condition is not suitable.
369. Should a basis of charges obligation for EAD STD vs LA be introduced, we would propose that the control considers the relative positioning of the price versus the DLRIC to DSAC range. It should be applied to a combination of connection and rental, as opposed to two separate conditions 5A.13i and 5A.13ii.

**Figure 10 – Proportionality of prices and costs for LA and STD product variants**



Proposed condition:

$$\frac{(Price_{Rental\ STD} - DLRIC_{Rental\ STD}) + (Price_{Cx\ STD} - DLRIC_{Cx\ STD})}{(DSAC_{Rental\ STD} - DLRIC_{Rental\ STD}) + (DLRIC_{Cx\ STD} - DSAC_{Cx\ STD})} \leq \frac{(Price_{Rental\ LA} - DLRIC_{Rental\ LA}) + (Price_{Cx\ STD} - DLRIC_{Cx\ LA})}{(DSAC_{Rental\ LA} - DLRIC_{Rental\ SLA}) + (DLRIC_{Cx\ STD} - DSAC_{Cx\ LA})}$$



Example

370. We compute the x showing relative pricing of EAD100M LA compared to DLRIC on the DLRIC to DSAC scale. Prices below are as at July 2015, DLRIC/DSAC information is as per published RFS 2013/14.

**Table 19 - EAD100M LA proportional recovery over DLRIC**

		Price	DLRIC	DSAC
<b>100M LA</b>	<b>Cx</b>	£1,900	✂	✂
	<b>Rental</b>	£1,605	✂	✂
	<b>TCO</b>	£3,505	✂	✂
	<b>X</b>	✂		

371. We then compute y showing the relative pricing of EAD1G LA compared to its own DLRIC on the DLRIC to DSAC scale.

**Table 20 - EAD100M STD proportional recovery over DLRIC**

		Price	DLRIC	DSAC
<b>100M STD</b>	<b>Cx</b>	£1,950	✂	✂
	<b>Rental</b>	£2,400	✂	✂
	<b>TCO</b>	£4,350	✂	✂
	<b>Y</b>	✂		

372. In this particular example,  $y \leq x$  and therefore we would conclude that EAD100M standard pricing is indeed appropriate considering the proportionality of costs between Standard and LA. We would then review other variants of the products at different bandwidths (1G, 10M).
373. While we strongly disagree with the necessity for such an STD vs LA basis of charge obligation, we would also like to clarify that should it take effect, we would need to consider the following:
- When establishing basis of charges, we would need to compare forward looking prices of Year N with backward-looking DLRIC and DSAC of Year N-2, due to the schedule of publication of RFS.
  - Other approaches (e.g. comparing to costs of Year N-1) would not permit BT to know whether its price changes would comply before August of the controlled year, meaning it could be too late for BT to make the substantial price changes required to achieve compliance in the year.
  - Ofcom does not clarify whether the EAD rental for Standard variants would apply to each and every service (e.g. EAD 1G Standard Extended Reach, EAD 1G Standard Resilience Option 1, etc.) for which we do not have a full breakdown of DLRIC and DSAC. We propose that the test applies only to the plain EAD Standard product variant, compared to the plain EAD LA variant, given they represent the largest volumes, and that BT constantly reviews its portfolio to ensure consistency between product variants with respect to the main references (e.g. we test for proportionality of reductions between EAD 1G STD ER and EAD 1G STD).

#### **Draft SMP condition 5A.14**

##### General to the controls in the First Relevant Year

374. We agree with draft SMP condition 5A.14 (and section 10.33 of the LLCC Consultation) which enables BT to discharge both the starting charge adjustments and charge control formulae by making one price change on 1 April. Operational constraints on billing systems means BT cannot change prices at dates other than the first day of the month, meaning that we could not make changes on 2 April and, instead, would have to discharge higher price reductions on 1 May.

#### **Draft SMP conditions 5A.15-5A.17**

##### Term products and discounts

375. We believe strongly that discounted term products should be included in the price controls, and should count towards the discharge, in addition to the introduction of a 3-year facility payment scheme. This is dealt with in paragraphs 10.26-10.29 of the LLCC Consultation.
376. Draft SMP conditions 5A.15, 5A.16 and 5A.17 define which services should be considered for the calculations of price changes and revenue accruals. The current position for demonstrating compliance is that where there is a long term product, all volumes should be allocated to the one year term so that revenues are presented as gross revenues (without the 'term discount' for the five year term or seven year term). Therefore a price reduction could be made to the one year term, and BT would comply with the control. However, if all customers were to take the five year term, reducing the price of the one year option would not flow through as a benefit to any customers. In this situation, the exclusion of products with a longer minimum term does not benefit the market, and is not objectively justifiable or proportionate to what Ofcom is intending to achieve.
377. Should 5-year and 7-year term products not be part of the basket, then they should be fully excluded from calculations of accrued revenues, and any considerations of volumes, and draft SMP condition 5A.16 should be modified accordingly.
378. We agree with the proposed formula in draft SMP condition 5A.22, where  $R_{3t} = 1/3 C_{1t} + R_{1t}$  provides a simple and easily verifiable condition for validating the rental charge of a 3-year term product with no connection charge. We also agree with draft SMP condition 5A.17, which lists it as a separate service.

#### **Draft SMP condition 5A.22**

##### Use of prior period revenues to weight price changes

379. We agree with the principle of accrued revenues which reflects volumes of rentals as at 31 December of the year prior to the control, and volumes for connections and other services from the 12 months ending 31 December of the year prior to the control. This is consistent with the current control and provides a good compromise between reflecting as closely as possible the reality of volume changes by product, while offering certitude that price changes will be compliant. This is addressed in paragraphs 10.13 – 10.22 of the LLCC Consultation.
380. We do, however, have the following comments on how Ofcom's proposed approach is implemented in draft SMP condition 5A.22 (i)b and (ii)b.

381. We welcome the proposal that ECCs and TRCs should be treated separately but there are other ancillary services that would normally fall in the "other than rental" ancillary services category. This includes upgrades, re-grades, migrations and cancellation charges. Ofcom recognises (in paragraph 6.180 of the June 2015 LLCC Consultation) that it has no reason to have concerns about these charges compared to others in the basket, and that a sub-cap presents the merits of simplicity when demonstrating compliance. Ofcom also recognises that including them in the main basket without a safeguard is unlikely to result in an effective control of their charges.
382. We estimate these ancillary services to represent less than 1% of the total Ethernet revenues in both 14/15 and 15/16. We have limited information on volumes, revenues or costs for each individual ancillary item, many of which have zero volumes against them in a given year.
383. Ancillary products are disproportionately complex to model, and there are very few benefits to the end customer of including them in accrued revenue modelling. In addition, BT is likely to offer even more ancillary products in future, in particular due to the discontinuation of legacy services in 2018, which means we are likely to introduce even more offers from any legacy product (e.g. any bandwidth, any LA or standard variant) to any strategic product (e.g. EAD and EBD).
384. We also do not believe that Ofcom has included ancillaries in its modelling when determining the value of X, and therefore BT should not be asked to include them in the accrued revenue formula. Also, because this has not been modelled by Ofcom, removing ancillary services from the calculation of accrued revenues will not have an impact on any other aspects of the LLCC Consultation.
385. A sub-control as per Condition 5A.11 on ancillary services is sufficient in protecting CPs against price increases of ancillary services. For these reasons, Openreach proposes that "services other than rental" should be limited to "connections services" in draft SMP condition 5A.22 (i)b and (ii)b.

Flexibility to deal with any changes in the services offered by BT

386. We agree with Ofcom's proposal to include a higher level description of services than in the March 2013 BCMR Statement, and that this is sufficiently clear to identify the services within the charge control (paragraph 10.7 of the LLCC Consultation).
387. Paragraphs 10.34 to 10.37 of the LLCC Consultation cover the possibility of BT making variations to its service offering and Ofcom's proposal to deal with this within the charge control. There are a number of situations where products are withdrawn or introduced, and we would appreciate confirmation that the following is correct:

*Introduction of a new product which wholly or substantially replaces an existing product*

388. The new product would be subject to the same charge control as the replaced product. In this situation, if there is a one to one mapping between the replacement and new products, we would expect that the prior year weight associated with the replaced product is transferred to the new product at the point at which the replaced product is withdrawn from new supply. This will incentivise price reductions on the new products, which would not otherwise have any weighting and therefore would not be effectively recognised by the control. This would also allow price reductions to drive migrations.

*Introduction of a new product that does not replace an existing product*

389. If a new product is launched that enhances the portfolio rather than replaces an existing product, we would not expect this to be covered by the charge control. In this situation, we would expect Ofcom to wait until the next charge control to include the new product, if inclusion in a new control is warranted, by which time it would then have a prior year weight and the control would be more effective.

*Withdrawal of a product with no replacement service*

390. If a product is withdrawn with no replacement product (or where there is a replacement product which is not within the scope of the charge control), the prior year weight should be set to zero when the product is completely withdrawn from sale. This would mean that the product would be controlled for as long as it is provided. However, if the product is already withdrawn from service at the start of a control year, its prior year weight would be set to zero.

## **Draft SMP condition 5A.19**

### Compliance monitoring

391. We have reviewed Ofcom's proposal with regard to the reporting compliance, as outlined in draft SMP condition 5A.19, which is in line with the current control. We believe we can provide Ofcom with the following, as proposed:
- the calculated Percentage Starting Charge Change and the calculated Percentage Change relating to each Basket specified in draft SMP conditions 5A.1(i) to 5A.1(iv) and 5A.5(i) to 5A.5(iv);
  - the calculation of the Percentage Starting Charge Change and the Percentage Change as set out in draft SMP conditions 5A.2 and 5A.6, including for each specific service in the Basket;
  - all relevant Accrued Revenues during the relevant Financial Year in respect of the specific service (as applicable) in the Basket;
  - charges published during the Relevant Year and the Prior Year, including published charges for Time Limited Discounts, the Three Year Term Products but excluding any other forms of discounts;
  - the relevant published charges at the start of each Relevant Year;
  - the Relevant Year Weighted Average Charges and the Prior Year Weighted Average Charges for all of the services to which draft SMP condition 5A.6 applies.
392. As explained in our comments to draft SMP condition 5A.13, we have reservations and anticipate difficulties to accurately report or source:
- DLRIC / DSAC information from the prior year (as opposed to the year preceding the prior year, which we referred to as Year N-2); and
  - Ancillary service information of volumes and revenues (i.e. for services other than connection, rental, main link and resilience).

## **Draft SMP condition 5B: Controls of safeguard cap for Very High CISBO Services**

393. Should Ofcom decide to introduce a Dark Fibre remedy, we do not believe any CPI-CPI safeguard should be required to ensure prices do not increase for very high CISBO services.
394. As we have outlined previously in here, and in section 17 of our BCMR response, should a Dark Fibre remedy be introduced, prices for very high bandwidth services would have to reduce significantly. In particular, connection, rental, and main link charges, will be dropping significantly. A safeguard cap is therefore a redundant control.
395. Should Ofcom decide that such a safeguard cap is required, we broadly agree with the approach proposed. The same provisions as explained in our comments on Draft SMP conditions 5A.11-12 should be made to test against maximum charges in the year rather than weighted average, and excluding for time limited discounts and special offers. For the same reasons discussed in relation to Draft SMP condition 5A.12, we believe there is otherwise a risk that Openreach cannot bring back prices to their original value after a time limited discount in the prior year, with the existing formula.

396. We also note that our labour costs for installation for WDM services are paid for on a contract basis and are commercially negotiated for the duration of the contract (generally, 5 years) and cannot be reduced over time to meet cost reduction targets. These items  $\propto$ , and new contracts would be reviewed during the control, meaning we cannot be certain that selected charges sub-contracted by Openreach to suppliers would not end up being higher than our costs (a similar situation we are facing for ECCs). Thus, we believe a CPI-0 rather than CPI-CPI would be more appropriate to cover all ancillary charges.

#### **Draft SMP condition 5C: Basis of charges of obligation in relation to the Dark Fibre services**

397. BT has expressed a number of very serious concerns both in its response to the BCMR Consultation (sections 4 and 17), and in this Response (sections 1, 2.1, the responses to questions 6.3, 8.1, and in Annexes A and B), around the introduction of the Dark Fibre services, and specifically on pricing.

398. We have explained how EAD1G will lead to unreasonably low prices for Dark Fibre compared to another reference such as EAD10G. We have also discussed how a LRIC differential may not be optimal for removing arbitrage as the main factor in take-up for Dark Fibre.

399. In this section, we recap some of the implementation issues relating to the legal instrument in the proposed draft SMP condition 5.1.

400. First and foremost, we consider it is important that draft SMP condition 5C is written as a guidance allowing for enough flexibility to accommodate any and all changes in the final reference offer for Dark Fibre, until its launch, should it be mandated. There are significant uncertainties around this remedy, and it is therefore important that the conditions are not written in a manner that makes it impractical or inflexible for Openreach to deliver the Dark Fibre service, should it be mandated.

401. For instance, the overall guidance on 'each and every charge' in draft SMP condition 5C.1 poses a number of problems, which we have described in more detail in our response to question 8.1:

- increased price arbitrage;
- reduction in cost recovery on EAD variants that do not map into a Dark Fibre product;
- practicality of implementation, since some of the charges simply do not exist in EAD e.g. a Dark Fibre migration service could not be mapped onto its corresponding 1Gbit/s EAD service.

402. Consequently, BT's view is that Ofcom should remove the 'each and every charge' from draft SMP condition 5C.1 in its Final Statement.

403. When considering the long run incremental costs to be subtracted in draft SMP condition 5C.1 (i), BT has described in Annex A, a possible approach to identify the costs that would be avoided, which builds on Ofcom's approach described in section 8 of the LLCC Consultation. As we develop our understanding of the Dark Fibre remedy, we consider it is important that BT retains the flexibility to refine this methodology, should the LRIC approach be retained as the preferred approach to derive the Dark Fibre price from an EAD service.

404. BT has listed in its response to question 8.1 and in its considerations on the Dark Fibre product in section 4 of its BCMR Consultation response, a number of factors that would result in

incremental costs between the Dark Fibre service and EAD service. This list will need significant work. It is unclear at this stage whether the 'costs to be averaged over the Relevant year' in draft SMP condition 5C.1(ii) would be practical, in particular in the first year of operation of Dark Fibre, as a number of these costs would only be incurred for Dark Fibre, and could not be known or calculated in advance.

405. Ofcom introduces in draft SMP condition 5C.2 its approach for pricing dual fibre. BT broadly agrees with this approach that the charge for multiple fibres should be that of a single fibre multiplied by the number of fibres, and adjusting that amount to reflect incremental cost savings of providing network access to more than one optical fibre at the same time. We would like to seek confirmation that Ofcom's understanding of the cost savings is aligned with that described by BT in our response to question 8.1 where we identify circa. 30% savings from sales & product management, service assurance and revenue debtors.
406. With respect to draft SMP condition 5C.3 on use of prior year regulatory financial statement (and corresponding draft SMP condition 5C.8 definition of Prior Year), we have described in our response to question 8.1 that Ofcom proposes that compliance should be assessed based on cost data that is available to BT at the point at which it sets its charges, namely for each year to the end of December. We believe that DLRIC cost data to end-December may either not have been produced within those timescales, or if available, that such data would not have been sufficiently audited for use as the basis for setting prices.
407. In draft SMP condition 5C.5, Ofcom indicates that 'three months after the relevant year' – this is three months after 31 March each year (i.e. 30 June), the records should be published including unit long run incremental costs. However, the accounts (RFS) are not due to be published until 31 July every year. We may not have final versions of cost data in the accounts as at 30 June (and it will not have been audited or reviewed in detail at that point). This applies to items 5C.5 ii, iii, iv. We therefore do not think Ofcom's approach is practicable.

#### **Draft SMP condition 5D: Controls of the TI Services Basket**

408. BT agrees with the proposed controls of the TI Services Basket pursuant to Draft SMP condition 5D.

#### **Draft SMP condition 5E: Controls of Accommodation Services**

409. We agree with the proposed draft SMP conditions 5E.1, 5E.2, and 5E.3 which set out the principles for accommodation services and overlapping accommodation services.
410. For increased clarity, we propose that Ofcom stipulates in the Annex to Condition 5E – section 1 that Access locate charges also exclude the overlapping services, or alternatively that Access locate charges referred to in this condition are the bulk (base administration and per PoP transfer charges) and singleton licence conversion from RANF to Access locate licence administration charge on the Openreach price list link referred to in footnote 78 of the Annex.
411. We agree that the definition of overlapping accommodation services should currently be as per the Fixed Access Market Review published in June 2014, and would draw Ofcom's attention to the fact that this definition could possibly be different in 2017/18 when the current FAMR control period ends and new controls are introduced.

### **Draft SMP condition 5F: Controls of the ECC Services**

412. We disagree with draft SMP condition 5F.5. We disagree that GCBI is the appropriate index in relation to Contractor ECCs, since third party contractor's costs have increased beyond GCBI as the contract term expired. As outlined in question 9.2, the ECC charge control should not use the GCBI index, which has diverged from the true rate of pay inflation over the last two years. A more relevant index would be the Tender Price Index ("TPI"). The TPI is a reflection of what market rates actually are and factors geography when it measures the Movement of Prices in Tenders for Building Contracts (see paragraph 328 above).
413. As outlined in our response to draft SMP condition 5A.10, similarly we disagree with draft SMP conditions 5F.6 and 5F.7, which are impractical conditions.
414. We agree with draft SMP condition 5F.8.
415. We disagree with draft SMP conditions 5F.9 and 5F.10: we disagree with Ofcom's proposal to fix the threshold charge at £2,800 throughout the charge control period. It would be more appropriate to have the flexibility to change the exception threshold as ECC costs or circuit demand change over time. Moreover, if there was a material shift in ECC costs and / or circuit demand patterns, then BT would like the flexibility to set a revised exception threshold and balancing charge to address such shifts in costs and / or demand; see response to our response to question 9.2 of this Response for more detail.

### **Draft SMP condition 5G: Controls of Time Related Charges**

416. We disagree with draft SMP condition 5G.1. Openreach disagrees with Ofcom's proposal for a 12.3% starting charge adjustment on Ethernet TRC visit charge to reflect WLR and LLU TRC charges. Ethernet TRCs are different from copper TRCs and the same economic rationale that Ofcom employed to set the charges in copper therefore does not apply. The vast majority of TRCs are for copper products and it was this consolidated data that Ofcom examined when considering the Fixed Access Market Review charge control in 2014, without splitting out the higher work allocation and engineering requirements for Ethernet TRCs.

## **3.10 Regulatory Financial Reporting**

***Question 11.1: Do you agree with our proposals for BT's Regulatory Financial Reporting, including in particular:***

***a. the proposed Consistency with Regulatory Decisions Direction; and***

***b. the proposed Direction modifying requirements relating to the preparation, audit, delivery and publication of the Regulatory Financial Statements, and Direction modifying requirements relating to the form and content of the Regulatory Financial Statements?***

***If not, what alternative would you propose and why?***

417. We set out below our comments on Ofcom's proposals in Section 11 of the LLCC Consultation and on its proposed Directions for implementing its proposals, i.e.



- a. The proposed Consistency with Regulatory Decisions Direction
- b. The proposed Direction modifying requirements relating to the preparation, audit, delivery and publication of the Regulatory Financial Statements
- c. The proposed Direction modifying requirements relating to the form and content of the Regulatory Financial Statements
- d. Draft SMP condition 11 – Regulatory Financial Reporting (May 2015 Business Connectivity Market Review Consultation)

We deal with these in turn below.

**a. The proposed Consistency with Regulatory Decisions Direction**

418. Ofcom's proposals on the requirement for consistency with regulatory decisions are set out:

- In paragraphs 11.14-11.25 of Section 11 of the LLCC Consultation; and
- In the "Proposal for direction – Consistency with regulatory decisions", pages 67-73 of Annex 15 of the LLCC Consultation.

In Section 11 of the LLCC Consultation, Ofcom proposes ten adjustments (a-j) (as set out in Tables 11.3 and 11.4 of the LLCC Consultation). We respond to each of the proposed adjustments in turn below. We then set out our comments on the proposed Consistency with Regulatory Decisions Direction in Annex 15, which implements Ofcom's proposals.

***Ofcom's proposals in Section 11 of the LLCC Consultation***

**a) Access cards**

419. Ofcom proposes that Access cards must not be allocated to business connectivity services that do not use them. We have not attributed such costs to business connectivity services in the 2014-15 RFS.

**b) June 2015 Cost Attribution Review – errors**

420. Ofcom proposes the following requirements:

- Apportion Core and Backhaul fibre costs on the basis of the bandwidth and the length of the fibre.
- Apportion Access fibre costs in accordance with the proportion of fibres by circuit type.
- Backhaul, Core, and Access duct, when utilised by 21CN fibre plant groups must be allocated to those 21CN fibre plant groups.
- BT Wholesale transfer charges from non-core units that are general in nature and that relate to services in residual markets must not be allocated to business connectivity services.

421. As noted by Ofcom we have corrected the errors listed in Table 11.3 in the 2014-15 RFS.

**c) June 2015 Cost Attribution Review – General Overheads**

422. Ofcom proposes the BT must attribute General Overheads on the basis of smaller cost categories that reflect the underlying nature of those cost categories.
423. We do not agree with Ofcom's proposed treatment of General Overheads in either the charge control model or the RFS. We set out our concerns with the proposal and suggested alternative in our response to the June 2015 Cost Attribution Review, and in response to questions 6.4 and 7.4 above.

**d) Cumulo**

424. Ofcom proposes that Cumulo costs and rebates must be attributed as set out in the March 2015 Directions Statement.
425. We have amended the proposals in the March 2015 Change Control Notification (section 3.12) to address the concerns raised by Ofcom and implemented the revised methodology in the 2014-15 RFS (see note "Cumulo rebate allocation" on page 15 of the 2014-15 RFS).

**e) Transmission equipment**

426. Ofcom proposes that BT must exclude the MCE and depreciation cost of Transmission assets deployed prior to 2010/11 from business connectivity services.
427. We do not object to the exclusion of the MCE and depreciation cost of Transmission assets deployed prior to 2010/11 from Ethernet Services in the RFS.

**f) Restructuring costs**

428. Ofcom proposes that Group restructuring costs must not be recovered from business connectivity services.
429. We do not consider it would be appropriate to exclude Group restructuring costs from business connectivity services in the RFS. Even if adjustment of such costs was made by Ofcom for modelling purposes, which will vary from year to year, it does not follow that they should be excluded from regulated services in the RFS; the RFS is a record of costs incurred in the year concerned and should therefore not exclude costs of an irregular or non-recurring nature. As we said in response to question 7.2 above, we consider that Group restructuring costs should in any case not be adjusted for modelling purposes.

**g) Credit notes**

430. Ofcom proposes that BT must allocate SLG credit notes against the income to which these SLG credit notes relate to and not SLG payments.
431. We agree that the proposed correction is appropriate.

**h) TI volumes**

432. Ofcom proposes that BT must separately identify and separately account for Featurenet TI volumes and costs.

433. We agree that Featurenet TI volumes and costs should be separately identified and accounted for outside the TI market. We have amended the treatment of Featurenet in the 2014-15 RFS (see note (vi) on page 13 of the 2014-15 RFS).

**i) QoS resource uplift**

434. Ofcom proposes that no estimate of the adjustment related to item i) is required – this is included in Table 11.4: “Adjustments proposed not to be included in either the RFS or the Adjusted Financial Performance Schedules”.

435. We agree with the exclusion of QoS resource uplift adjustments from the Direction for the reasons that Ofcom has set out.

**j) SLG Payments**

436. Ofcom proposes that no estimate of the adjustment related to item j) is required – this is included in Table 11.4: “Adjustments proposed not to be included in either the RFS or the Adjusted Financial Performance Schedules”.

437. We agree with the exclusion of SLG Payments adjustments from the Direction for the reasons that Ofcom has set out.

438. We do not consider that there are any other items in addition to those listed above that should be included within the Direction.

***Proposal for direction – Consistency with regulatory decisions***

439. Ofcom's proposed direction which implements the above proposals on the requirement for consistency with regulatory decisions (Consistency with Regulatory Decisions Direction) is set out in Annex 15.

440. Our comments in paragraphs above apply.

**b. Proposed Direction modifying requirements relating to the preparation, audit, delivery and publication of the Regulatory Financial Statements**

**c. Proposed Direction modifying requirements relating to the form and content of the Regulatory Financial Statements**

441. Ofcom's proposals relating to the preparation and delivery, and to the form and content of the RFS are set out:

- In paragraphs 11.26-11.39 of Section 11 of the LLCC Consultation;
- In the “Proposal for direction setting requirements in relation to preparation and delivery of the Regulatory Financial Statements”; and
- In the “Proposal for direction setting requirements in relation to the form and content of the Regulatory Financial Statements”.

We set out below our comments on the proposals in Section 11 and on the two proposed directions which implement Ofcom's proposals, included in Annex 15.

### ***Ofcom's proposals in Section 11 of the LLCC Consultation***

442. We consider that Ofcom's proposals in Section 11 and, in particular, the required granularity of published cost information, are not objectively justifiable, are disproportionate, and are inconsistent both with the approach to reporting set out in the Statements issued following the review of regulatory reporting and with the approach adopted for other markets.
443. Ofcom issued its Final Statement on Regulatory Financial Reporting on 20 May 2014 (the "May 2014 RFR Statement"), following a consultation with stakeholders through workshops and formal consultation documents during the preceding two years. In the May 2014 RFR Statement, Ofcom set out how the reporting requirements would correspond to other remedies imposed in each market, in particular to cost orientation and charge control modelling.
444. In the May 2014 RFR Statement Ofcom indicated that, in respect of services subject to charge control: "we think that the ... publication of proportionate FAC product and basket information that allows CPs to understand the movement of cost over time remains a legitimate requirement." (paragraph 3.50). Ofcom further noted that: "In some cases the volume and detail of information provided has prevented accessibility and understanding" (paragraph 4.114).
445. The principles set out in the May 2014 RFR Statement were implemented in the fixed access and wholesale broadband access reviews in 2014. For each market, Ofcom specified a clear link between the cost accounting requirement and other remedies:
- For **WLA** (paragraph 13.78, Ofcom Statement "Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN 30 : volume 1" dated 26 June 2014) and **WFAEL** (Ibid, paragraph 15.47): *"if the associated charge control is a basket design then the reported FAC should also be for the total basket, and if it is a single product charge control then the reported FAC should also be for the individual product ... we consider that trends in profitability at this level are informative in the context of considering the effectiveness of remedies as a whole, and that FAC information at this level also provides transparency for stakeholders (including how BT has allocated costs across different baskets or single controls). We see this as facilitating stakeholder confidence that such costs have been allocated consistently. It also mitigates against the risk of double recovery of costs or that costs might be unreasonably loaded onto particular charge controls."*
  - For **ISDN30** (Ibid, paragraph 17.82) and **ISDN2** (Ibid, paragraph 17.156): *"Although we consulted on requiring BT to maintain FAC...data ...we consider that specific cost accounting requirements for the maintenance of such data for ISDN30 [or ISDN2] would not be appropriate. In particular, given the approach to setting the ISDN30 [or ISDN2] charge controls ... and the potential distortions within the ISDN30 [or ISDN2] cost data we have set out, we consider that FAC... data would provide limited insight into the effectiveness of our remedies during this review period. It would also be of limited benefit for transparency of cost purposes. We consider that this weakens the case for imposing cost accounting obligations for the maintenance of such data, irrespective of whether such cost data is onerous or otherwise to provide ... as the obligation must be objectively justifiable and proportionate, which for these reasons we do not consider to be the case. Further, our intention in the consultation was not to increase the cost accounting requirements on BT..."*
  - For **WBA**, we are required to publish at the level of sub-basket of the charge control, where a charge control is in place (see page 101 of the 2014-15 RFS).
  - In the **calls markets**, Ofcom set out how market level reporting effectively meets the needs of stakeholders. In the fixed call origination and termination markets we have no cost accounting requirements below market level:

*"We will also continue to require BT to publish FAC information for wholesale call origination services at the market level, but not at the service level. We consider that publication of FAC at a service level is not proportionate ... However, we do see value in the reporting of FAC information at a market level. Trends in market level profitability are informative in the context of considering the effectiveness of remedies as a whole. Market level FAC information also provides transparency regarding how BT has allocated costs across regulated markets (and between regulated and unregulated markets). We see this as facilitating stakeholder confidence that such costs have been allocated consistently. It also mitigates against the risk of double recovery of costs or that costs might be unreasonably loaded onto particular services or markets"* (Ofcom, Review of the fixed narrowband services markets, Statement on the proposed markets, market power determinations and remedies, 26 September 2013, paragraph 5.406),

- For call termination, Ofcom said: *"We will also continue to require BT to publish FAC information for wholesale call termination services at the market level..."*. (Ibid, paragraph 6.196).

446. The proposals set out in the LLCC Consultation however depart substantially from the reasoning set out above.

#### Public information

447. BT considers the proposal set out in the first three bullets of paragraph 11.29 broadly appropriate (except for the reference to individual services, as explained below). However, we do not agree with the proposal in the fourth bullet, which requires a high level of disaggregation.

448. The initial proposals in paragraph 11.29 of the LLCC Consultation are consistent with the reporting framework and the approach adopted in the FAMR and WBAMR and demonstrate a clear link between the cost accounting requirement and other remedies involved:

*"In accordance with our decision in the May 2014 Regulatory Reporting Statement, which set out that cost, volume and revenue information within the RFS should be provide the appropriate level of detail and make clear in which basket regulated products are reported, we propose that:*

- *BT must disclose the revenue and FAC costs for business connectivity markets;*
- *BT must disclose the revenue, volume, average price and FAC for regulated wholesale leased lines services at the level they are regulated (i.e. at the basket, sub-basket level and individual service);*
- *BT must disclose the calculation of FAC based on network component costs and usage factors for regulated wholesale leased lines services at the level they are regulated (i.e. at the basket, sub-basket level and individual service);and... "*

However, we do not understand the reference to "individual service" in the second and third bullets above. As price controls are implemented at the sub-basket level we should expect this to be "the level they are regulated" and reported, consistent with the approach adopted in other markets.

449. Furthermore, the last bullet in paragraph 11.29 proposes that:

*"• the information above should be produced where applicable as separate reports for i) internal and external circuits, and ii) rentals and connections. Rentals should also be separated by charging elements, i.e. separate information provided for local ends, links, terminating segment charge and elements currently known as regional trunk..."*

450. No reason is given as to why this level of disaggregation is necessary or useful to stakeholders. In our view this proposal is not objectively justifiable and is disproportionate to what it is intended to achieve.

Additional public information

451. Furthermore (in paragraph 11.30 of the LLCC Consultation), Ofcom proposes:

*"We propose to require BT to publish the same level of information for a number of individual services at the service level...We consider that stakeholders should be provided with information about individual services, because this will enable them to observe cost, volume and revenue data for the services that they purchase and be able to understand the relativity of the services within the baskets and sub-baskets. It is important that stakeholders are able to scrutinise the regulatory accounts in order to understand how BT is recovering its costs, are able to comment on the returns that BT is making and also consider the impact of regulation on BT for the services they purchase. This in turn will provide stakeholders with confidence that BT has complied with its regulatory obligations and enable them to assess the effectiveness of the remedies we have imposed for the services that they purchase. "*

452. We disagree that stakeholders require cost information to understand the relativity of services within the baskets; revenue and volume information is sufficient for this need. They do not need to see services below market (or if lower, basket) level to understand *"how BT is recovering its costs, ...to comment on the returns that BT is making and also consider the impact of regulation on BT for the services they purchase."* Such aims, as Ofcom has recognised in other market reviews, can be achieved by the publication of costs and returns at market/basket level. In order to assess the effectiveness of the remedies imposed for services they purchase, stakeholders should be supplied with information at the same level as those remedies. This would be objectively justifiable and proportionate in relation to the aim intended.
453. The proposals list 15 CISBO (paragraph 11.32 of the LLCC Consultation) and five TISBO services (paragraph 11.33 of the June 2015 LLCC Consultation) for which this information should be published. We note that there would be two CISBO markets to which reporting obligations would apply (London Periphery and Rest of UK). Ofcom further proposed that each service must be broken down (paragraph 11.34 of the LLCC Consultation) into internal and external elements, rental and connections, and four circuit elements. We calculate this would require that unit costs for 68 separate services be published for the TISBO basket, and 120 services for the CISBO basket.
454. Thus while in the fixed access and WBA markets we are only required to publish a single cost figure for each basket, Ofcom's proposals would require BT to publish 188 cost items for the two business connectivity baskets. We consider this is not objectively justifiable, disproportionate and inconsistent with other remedies imposed.
455. Ofcom proposes that "BT set out the LRIC for the EAD and EAD LA services listed in paragraph 11.32 above in the market summary for CISBO Non-CLA. This will ensure that CPs are able to monitor the requirement for the differential between EAD and EAD LA services ..." (paragraph 11.35 of the LLCC consultation).
456. We do not believe it would be necessary for stakeholders to monitor this differential. Such information would be requested from us by Ofcom, which would be sufficient for Ofcom to monitor our compliance with the proposed pricing requirement. A publication requirement is therefore unnecessary, unjustified and disproportionate.

457. Ofcom also proposes “a specific requirement on how ECC credits are recorded and reported within BT's Regulatory Financial Reporting. As set out in Section 9, BT does not separately account for the cost of ECCs. BT's current approach when reporting ECC costs in the RFS is to assume that costs equate to ECC revenue less the regulated rate of return, making accurate identification of ECC costs problematic. We propose ... to separately account and report ECCs in the market summary for the CISBO Non-CLA in a manner compliant with the proposed Regulatory Accounting Principle number five at the level of the proposed remedy.” (paragraph 11.36 of the LLCC consultation)
458. We do not accept that our current accounting methodology relating to ECC credits fails to comply with Regulatory Accounting Principle number five (Causality). Ofcom has not sufficiently and clearly set out why our current methodology does not comply with this principle. We note that Ofcom has made no reference to the methodology for ECC credits being inappropriate with regards to the Regulatory Accounting Principles in its Cost Attribution Review Consultation of June 2015.

#### Private information

459. For private reporting, Ofcom requires that any service with revenue over £1m should have cost information calculated and reported (paragraph 11.37 of the LLCC Consultation of June 2015). We estimate that for CISBO (rest of UK alone) this would be over 130 services (assuming a service to mean for this purpose an activity that would have a separate price list entry). Indeed as our cost allocation system would need us to mirror services in each of the two reported CISBO markets and the unreported Central London market, in order to reconcile totals for each service at the national level, together with the requirement for internal and external service reporting mentioned above, we would need to maintain over 780 services in our cost attribution system for CISBO markets alone. Such a requirement is wholly disproportionate and we recommend that Ofcom reconsiders the £1m threshold.
460. We suggest a more appropriate requirement for private reporting would be a similar level to that which Ofcom proposes for public reporting in the LLCC Consultation. However, lower volume services, for example in CISBO London Periphery, should be aggregated even for private reporting purposes.
461. We do not object to Ofcom's proposals for reporting of EAD 1Gbit/s and EAD 1Git/s LA setting out LRIC and FAC by component (paragraph 11.37 of the LLCC Consultation).
462. Ofcom proposes that “we propose that BT continues to provide a schedule (Detailed Service LRICs) where it sets out DLRIC and DSAC data for the wholesale leased lines services .... This schedule will ensure that we are able to assess whether our SMP conditions continue to address the underlying competition issues and enable us to make informed regulatory decisions.” (paragraph 11.38 of the LLCC Consultation)
463. We do not consider that Ofcom has made it clear to us and other stakeholders exactly how it will use DLRIC and DSAC data to meet these objectives. We consider that any requirement for reporting should be clearly linked to the other remedies imposed. Ofcom has not demonstrated such a link.

#### Conclusion

464. We therefore consider the proposed Directions objectively unjustifiable and disproportionate, and disagree that “the proposed Directions are no more than is required in order to ensure the effectiveness of the proposals in the May 2015 BCMR Consultation, including proposed pricing remedies and ensures that Ofcom and stakeholders are provided with a sufficient level of

information, and does not extend beyond these;" (paragraph 11.44 of the LLCC Consultation, third bullet).

465. Ofcom has not provided evidence that the publication of cost information below basket (or market if smaller) level, which adds a significant level of granularity, is either proportionate or objectively justifiable.
466. As an alternative, we suggest that publication of information below market (or where smaller sub-basket) level is restricted to revenue and volume data. Cost information below this level, could be provided to Ofcom where a clear requirement for use in specific market reviews could be demonstrated. In any event, such disaggregated data should only be provided to Ofcom on a confidential basis, should be proportionate to its needs, and should not in any case be published.
467. Ofcom's proposals are implemented in two proposed Directions:
- Proposal for direction setting requirements in relation to preparation and delivery of the Regulatory Financial Statements (Annex 15)
  - Proposal for direction setting requirements in relation to the form and content of the Regulatory Financial Statements (Annex 15)
468. Our comments above apply to the proposed Directions.

#### Compliance Information

469. Ofcom proposes that "BT must supply to Ofcom in an electronic format, no later than three months after the end of each Relevant Year, the data necessary for Ofcom to monitor compliance with the charge control as described in more detail within the 'General Provisions and interpretation' section of each of the SMP conditions. This information must reconcile to the RFS. We also propose that BT must publish a non-confidential version of the data on its website." (Paragraph 11.40 of the LLCC Consultation)
470. We note that this is a similar requirement to that imposed in fixed access and wholesale broadband access markets. We would expect, consistent with Ofcom's approach in these other markets, to redact from the non-confidential versions any commercially sensitive information not disclosed in the RFS.

#### Other requirements under the May 2014 RFR Statement

471. Ofcom notes that "In the May 2014 Regulatory Reporting Statement we made policy decisions in relation to the following requirements, which we said would be implemented by way of directions:
- *new Regulatory Accounting Principles;*
  - *the methodology to determine the RAV adjustment;*
  - *transparency requirements for the purposes of preparing and maintaining the accounting records, the Accounting Methodology Documents and the RFS;*
  - *requirements in relation to audit, form of the FPIA opinion and form of PPIA opinion for RFS;*
  - *requirements in relation to reconciliation report and accompanying audit opinion;*
  - *requirements in relation to preparation, delivery, publication, form and content of the RFS (in addition to those which we have described above); and*



- requirements in relation to network components.

*We said in the May 2014 Regulatory Reporting Statement that these decisions should be implemented across all regulated markets, including reporting of markets considered as part of the BCMR and narrowband market review. The above requirements have either been subject to consultation or we did not consider it necessary to consult. We therefore propose to issue directions necessary to implement the above policy decisions in the 2016 BCMR Statement.” (paragraphs 11.41 and 11.42 of the LLCC Consultation)*

472. We note Ofcom's approach and agree that no further consultation is required.

**d. May 2015 Business Connectivity Market Review Consultation - Condition 11 – Regulatory Financial Reporting**

473. BT's comments on draft SMP condition 11.21 annexed to the May 2015 Business Connectivity Market Review Consultation are set out below.<sup>49</sup>

474. We have no other comments at present on the proposed draft SMP condition 11.

475. Draft SMP Condition 11.21 provides:

*“The Dominant Provider must publish and deliver to Ofcom a list of each and every change to the Regulatory Accounting Methodology, by 31 March of the Financial Year in which the change to the Regulatory Accounting Methodology is to be made (the “Change Control Notification”)...”*

476. This reflects SMP Condition 21 of Ofcom's 2014 Regulatory Financial Reporting Statement.

477. It is clear from SMP Condition 21 and from the proposed draft SMP Condition 11.21, that 31 March is the cut-off date for any methodology changes to be proposed by BT.

478. The 2014 Regulatory Financial Reporting Statement provides for an exception “where changes to methodology are specifically requested by the auditor” (at paras.3.166-3.167):

*“3.166 In order for the process to function effectively there must be a cut-off point after which BT must not propose further changes. Aligning this point with BT's financial year end (31 March), will allow any methodology changes from reorganisations to be taken into account. The list of proposed changes submitted by BT on 31 March must be a complete list of all the changes which BT intends to apply in the Regulatory Financial Statements. We note that this is a change from what we proposed in the 2013 Consultation and we set out an explanation for that change below.”*

*“3.167 We are aware that the auditors review allocations as part of audit work and therefore changes to allocations (and indeed changes to other methodologies and accounting treatments) may be recommended by the auditors. Where changes to methodology are specifically requested by the auditor, they may be made in the Regulatory Financial Statements. Apart from these changes introduced by the auditors, the list of changes submitted on 31 March must therefore be complete.”*

479. The proposed draft SMP Condition is not clear on the process for post year-end methodology changes (i.e. those changes that we propose after the publication of the Change Control Notification on 31 March and before the publication of the RFS on 31 July), in other circumstances. In 2015, we uncovered a number of areas that required late amendment arising

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<sup>49</sup> See also BT's response to Ofcom's June 2015 BCMR consultation document Part A paragraph 8.29.

from Ofcom's comments on the Change Control Notification, data sources found no longer to be available, new services requiring methodology changes and other minor issues.

480. In the context of the 2014/15 RFS, Ofcom and BT both acknowledged that another exception is warranted where BT and/or Ofcom identify a change, after 31 March, which they agree on, and where those changes are not specifically requested by the auditor, for example, where the auditor does not consider such change material.
481. If these changes had not been made, we believe that certain figures in the 2014/15 RFS would have been misleading and/or inaccurate and would have required adjustment before use by Ofcom for the purpose of charge control modelling or other purposes. The proposed methodology changes were discussed with Ofcom and agreed through an exchange of letters (as explained on page 13 of our 2014-15 RFS). We suggest that a more formal process for agreeing late changes should be included in the final Directions.

### 3.11 Traditional Interface

**Question 7.1: Do you agree with our basket design proposals for TI services, including the need for sub-caps and/or sub-baskets? If not, what alternative would you propose and why?**

#### Baskets and sub-baskets

482. Ofcom's key proposals are summarised in paragraphs 7.4-7.5 of the LLCC Consultation:

*"We propose to charge control TI services within a single basket (TI basket). We propose that the price cap for this basket should be in the range CPI-6.25 to CPI-14.25%, with our proposed base case of CPI-12.25%.*

*We are also proposing some sub-cap and sub-basket controls where we believe that the overall basket cap would not offer sufficient protection to customers."*

483. We agree that it is always preferable to define a broad basket including all products within a defined market. In this case, therefore we would agree with a broad TI basket including all low bandwidth TISBO products up to and including 8Mbit/s.
484. Ofcom's proposed controls on the TI basket are set out in Table 7.1 and in paragraph 7.18 and discussed in more detail in paragraphs 7.35-7.44 of Ofcom's LLCC Consultation. BT's comments on Ofcom's proposals are set out below.
485. A sub-basket on 2Mbit/s RBS backhaul, NetStream 16 Longline and SiteConnect services (paragraphs 7.35-7.38): we disagree that there is a need for a sub-basket for the reasons mentioned below.
- The sub basket makes up around one-third of the revenues in the TI basket, mainly 2Mbit/s RBS backhaul. Given the basket cap of CPI-12.25% and 2Mbit/s RBS backhaul is also rapidly declining, the prices of the services in the main basket would need to decrease by much more than CPI-12.25% to mitigate the effect of price reductions on 2Mbit/s RBS backhaul. Since the charge control requires steep price reductions, Ofcom's concern that BT may have an incentive to concentrate price reductions on PPCs, rather than RBS backhaul services is unjustified.
  - A sub basket unfairly restricts BT's flexibility to incentivise customers to migrate from very low bandwidth leased lines and considers that a cap of CPI-CPI is an

adequate safeguard. In paragraph 7.37, Ofcom itself justifies why sub-2Mbit/s RBS backhaul services should not be in this sub-basket on the same grounds and yet proposes a sub basket. This is contradictory and does not support a sub-basket.

- Both the main and sub baskets are subject to a CPI-12.25% control and same sub-cap on all charges. A sub basket adds an additional layer of complexity that is not needed and BT is of the view that a broad TI basket is sufficient.

486. Draft SMP condition 5A.10 (and footnote 389 of the LLCC Consultation) addresses the case of excess revenue. We have expressed concerns with Ofcom that it would not be reasonably possible and/or practicable for BT to repay the affected CPs any excess revenue BT earns. The Excess is a single figure calculated across all CPs and all products. All prices in a basket may meet the sub-cap limits but there may still be an Excess. As a result, there is no one price which it would be possible to identify as giving rise to an over charge to for which a repayment is required. BT considers that the carry forward mechanism is entirely sufficient.

487. Draft SMP Condition 5D.21 states that the control uses the rental volumes on 31 December and connections volumes for the year to 31 December. BT recommends that September volumes are used rather than December for three main reasons. Firstly, the use of September volumes would align better with the RFS which is equally based on September volumes (mid-year figure). Secondly, the charge controls runs from 1 April to 31 March the following year like the RFS and September represents the mid-point of each year of the charge control. Thirdly, BT would have to re-run Core Transmission Costing System (CTCS) in January for the sole purpose of getting the retail circuit volumes, which would consume additional resource and put at risk notification of price changes for 1 April. BT therefore recommends the control uses September rental figures.

**Question 7.2: Do you agree with our approach to deriving our base year costs for TI services, including in particular:**

- a. our proposal in relation to the technology assumed for supplying controlled TI services for modelling purposes; and**
- b. our proposed cost adjustments to BT's 2013/14 RFS to form the base year costs?**

**If not, what alternative would you propose and why?**

488. Ofcom's top down approach forecasts BT's costs of supplying legacy controlled TI services. BT therefore agrees with Ofcom's proposal in relation to the technology assumed for supplying controlled TI services for modelling purposes. However, as set out below, Ofcom has overestimated the size of the base year cost adjustment (reductions). BT considers that only £15.9m of the £37.9m proposed base year cost adjustment for TI services is justified.

489. Ofcom's top down approach forecasts BT's costs of supplying legacy controlled TI services. BT therefore agrees with Ofcom's proposal in relation to the technology assumed for supplying controlled TI services for modelling purposes. However, as set out below, Ofcom has overestimated the size of the base year cost adjustment (reductions). BT considers that only £15.9m of the £37.9m proposed base year cost adjustment for TI services is justified.

490. BT agrees with Ofcom's proposed cost adjustments to BT's 2013/14 RFS in relation to error corrections. Whilst BT agrees that the CTCS allocation error identified as part of the CAR review requires exclusion of those costs from the TI base year costs there should be an equal and opposite adjustment to the Ethernet base year costs as the effect of this error was to

primarily to move costs from TI to Ethernet. It is imperative that Ofcom adjust the Ethernet base year costs accordingly. As BT has corrected all the errors identified by Ofcom in the 2014/15 RFS these cost adjustments will not be required when Ofcom updates the charge control model with 2014/15 RFS figures.

491. BT has explained in detail in its response to the CAR consultation that Ofcom has not demonstrated that the cost allocation methodology for general overheads was 'clearly inappropriate' in relation to the Regulatory Accounting Principles. There is therefore insufficient justification for making this adjustment to base year costs.
492. BT considers that the restructuring costs should be included in the base year as they are incurred to deliver efficiencies. BT disagrees with Ofcom that these costs are not relevant to the business connectivity markets. These costs were primarily for leavers, property and network rationalisation as part of a 'group wide programme'. These also affect regulated TI services; for example PDH network compaction is network rationalisation and leaver payments in BTW contribute to reduce headcount. It is unreasonable for Ofcom to expect BT to achieve efficiency gains without incurring any costs in order to achieve these reductions. Restructuring is an important part of rearranging the business activities so as to achieve cost savings.
493. Ofcom has incorrectly removed costs from the base year when correcting for an error it refers to as 'credit notes'. The error relates to the release of a provision for a PPC overcharging rebate and this was credited to costs instead of revenue. As a result of the mis-posting of this journal, the SLG costs became negative which is how the error came to light. Ofcom should therefore have added £2m instead of deducting £2m to correct for this error. Ofcom should reverse this adjustment and add £2m to the 13/14 base year costs (effectively adding £4m to the base year costs in the model.)

**Table 21 – Summary of adjustments to TI base year costs**

Proposed Adjustment	TI FAC IMPACT		Explanations
	Ofcom View	BT View	
	£m	£m	
Access cards	-0.2	-0.2	BT agrees with the exclusion of access card costs that have been allocated to TI on a future benefits basis.
June 2015 Cost Attribution Review – Errors	-18.2	-18.2	BT agrees with the error corrections proposed by Ofcom. One error relates to a CTCS allocation error where costs were not allocated to 21cn plant groups. Most of these costs should have gone into the AISBO Non WECLA market and therefore, Ofcom should have also added £9.4m FAC (£3.6m opex and £57.7m MCE) to this market. We, however, note that BT has corrected these errors in the 2014-15 RFS, published on 31 July.
June 2015 Cost Attribution Review – General Overheads	-13.5	0	BT's overhead allocation methodology is reasonable and Ofcom has not demonstrated BT's approach is 'clearly inappropriate'.
RAV	-2.4	-2.4	BT agrees with Ofcom's valuation of access copper and duct assets on a RAV adjusted basis.
Cumulo	11.4	11.4	BT agrees with Ofcom's proposal in relation to the attribution of cumulo rebates set out in the June 2014 FAMR statement and rebates relating to liabilities pre 2013/14.
Restructuring Costs	-4.5	0	BT considers that the restructuring costs should be included as they are incurred to deliver efficiencies.
Credit notes	-2	2	Relates to the release of a provision for SLG payments which was credited to costs instead of revenue. Ofcom should have added £2m to the base year costs instead.
TI Volumes	-8.5	-8.5	Identified by BT and relates to the re-pointing of Featurenet services into Residual markets.
Total	-37.9	-15.9	

**Question 7.3: Do you agree with our approach to forecasting costs and revenues over the period of the charge control in relation to TI services, including in particular:**

- a. our volume forecasting assumptions; and**  
**b. our efficiency forecasting assumptions?**

**If not, what alternative would you propose and why?**

Volume forecast

494. BT agrees that Ofcom's volume forecasting assumptions are appropriate for TI services.

495. Ofcom's forecast suggests that by 2018/19, BT's volumes of sub-2Mbit/s and 2Mbit/s TI local ends will decline by approximately 68% compared to 2013/14 - or around 20% per annum. This is consistent with BT's plans to close the platform that supports sub-2Mbit/s circuits in 2020 and this is reflected in the faster decline of sub-2Mbit/s services that Ofcom forecasts i.e. around 30% reduction per annum compared with 10% per annum for 2Mbit services.

496. The volume decline is also substantial for mobile backhaul services which are also expected to decline rapidly as mobile operators' bandwidth requirements grow and as Ethernet is more cost

effective at higher bandwidths. Other PPC volumes continue to decline as customers migrate to alternative, frequently lower-priced, services.

497. Ofcom notes<sup>50</sup> that the forecast volume decline is consistent with the recent trends they have observed as well as information received from BT, other operators and the industry analyst, all of whom forecast migration away from TI services, with sub-2Mbit/s services declining at a slightly faster rate than 2Mbit services.

#### **Application of efficiency assumption for TI services**

498. Similar to Ofcom's approach for setting the efficiency assumption for Ethernet services, Ofcom also carries out two sets of analyses to determine the range of efficiency estimates specific to TI services:

- Analysis of regulatory cost accounting information; and
- Analysis of BT's historical and forecast management accounting information.

499. We note that the efficiency assumption placed on TI services has dramatically changed from the last charge control, and is set at the same level as Ethernet services, despite the vastly different demand profiles, historic and forecast. We also note that Ofcom's main source of evidence is also BT's internal management data, and does not place any weight on the historic cost trends, again a departure from previous approach.

**Table 22: Summary of efficiency assumptions on TI services**

	<b><i>Efficiency assumption</i></b>	<b><i>Source</i></b>
<b>2009</b>	2.5%	Combination of unit cost trend analysis, time trend estimates from SFA studies and TFP analysis, with no catch-up assumption made as BT was estimated at being at the frontier
<b>2013</b>	1.5%	Unit cost trend analysis, taking into account declining nature of services in question
<b>2016</b>	4% to 7%, central estimate of 5%	Most relevance evidence considered to be historic and forecast internal management accounting data

Source: Ofcom

#### **Consistency of Ofcom's efficiency assumption**

500. BT does not consider it is appropriate to assume the same range and level of efficiency for TI and Ethernet services. This is a significant departure from its previous leased lines charge control decisions where separate efficiency assumptions are made, for the reasons that "*TI and Ethernet services are based on different underlying technologies and use different equipment.*"

<sup>50</sup> See paragraph A8.35 of the Annex to the LLCC consultation document

*In addition, they are at significantly different stages of life, with TI volumes in a state of decline and Ethernet volumes forecast to grow substantially”<sup>51</sup>.*

501. Furthermore, in relation to the 1.5% set in 2013, Ofcom noted that “this may be considered a relatively low target for efficiency improvements... However, TI services are a mature and declining set of markets and we believe the evidence does not justify making a stronger efficiency assumption... there is still some scope for BT Wholesale to reduce operating inefficiency, but less than in other services due to the declining nature of the service”<sup>52</sup>.
502. Ofcom also stated that the efficiency assumption was applied only to operating costs for TI services for the following three reasons:
- Asset price changes. *“As these are negative in real terms, this is equivalent to a capex efficiency assumption”.*
  - Lack of new capital expenditure. *“The forecast decline in volumes for TI services means that ... any potential efficiency in procurement and investment is minor”.*
  - Asset disposals. *“Given the types of assets employed in the TI market, it is unlikely that even an efficient operator could command a price for its unused assets higher than the expectations within our model”.*<sup>53</sup>
503. Ofcom has adopted similar asset price change assumptions as previous charge control, and therefore apply negative real asset price changes to the majority of TI assets. TI volumes continue to fall since the last charge control, so there is still limited new capital expenditure forecast by Ofcom’s model. Ofcom, however, has not explained why its position on asset disposals has now changed such that efficiency is now applied to capex for TI services. In the steady state, Ofcom applies an efficiency target to reinvestment capex only and not to disposals but Ofcom applies an efficiency target to additional capex/disposals. Ofcom should be consistent.
504. BT finds it surprising that Ofcom has chosen to adopt the same efficiency assumption (and in essence, a similar price trend) for TI and Ethernet services. The reports by Plum and FTI both suggest Ofcom’s proposals for TI services in the LLCC Consultation are out of kilter with the overall objectives for transition in the business connectivity market. We do not consider Ofcom has provided sufficient justification for its U-turn approach on efficiency for TI services.

### **Regulatory cost accounting information**

505. Ofcom’s adopts the same approach to calculating unit cost efficiency improvements for TI services as it did for Ethernet services, estimated a range of 2% to 3% averaged over 2009/10 to 2013/14, and summarised in Figure A8.32 of the Consultation. However, Ofcom appeared to have dismissed this evidence in its entirety as the lower end of the proposed range for TI efficiency is well above this estimate.
506. As with our response to Question 6.3 on Ethernet efficiency, we think there is relevance in looking at historic unit operating cost trends as Ofcom has done in previous controls, but we

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<sup>51</sup> A12.72, Ofcom, BCMR Statement, March 2013.

<sup>52</sup> A12.96, Ofcom, BCMR Statement, March 2013.

<sup>53</sup> A12.70, Ofcom, BCMR Statement, 2013.

disagree with Ofcom's simplistic comparison of costs without ensuring that changes that are not relevant to the normal operating conditions are excluded from the analysis.

507. We have not seen Ofcom's calculations of the pairwise comparisons of TI components, and therefore cannot comment on how the 2% and the 3% p.a. figures have been calculated. BT's own analysis gives a historic efficiency figure of between 1% and 2% p.a. over the three years to 2013/14. The higher efficiency figure of 2% is based on *unadjusted* RFS figures and the lower figure of 1% is after adjustments are applied remove the effects of "one-off items" and methodology changes. BT has adjusted for the following items in its "adjusted" figures:

- Cumulo rebates. Most rebates are the result of appeals associated with increasing MPF and vary year-on-year. Therefore, these rebates should be excluded when looking at the non-pay costs movement in the TI markets as they distort the non-pay costs;
- SLG credits in 2013/14. This relates to the release of a provision for a PPC overcharging rebate and this was credited to costs instead of revenue. As a result of the mis-posting of this journal, the SLG costs became negative which is how the error came to light.
- Treatment of trunk. National trunk and regional trunk above 2Mbit/s were separated out following the 2013 BCMR Statement. To enable a like-for-like comparison, BT has aggregated national and regional trunk for private circuits of 2Mbit/s and above.
- Geographic definition. Changes from CELA to WECLA following the 2013 BCMR Statement would result in changes in circuits and costs when comparing the 2012/13 data with 2013/14.
- Other changes in allocation, for example where 21CN costs stopped being allocated to TI components

508. The TI cost components have the benefit of being well established and relatively unchanged for a number of years. Ofcom's previous analysis of unit cost efficiency between 2003/04 to 2006/07 was 0.9% to 3.5%,<sup>54</sup> reducing to around 1.5% between 2006/07 to 2010/11.<sup>55</sup> The first period of the analysis included elements of catch-up, whereas the second one didn't. We consider the unit cost reduction for the period 2011/12 to 2013/14 of 1% to 2% are consistent with the previous results and support an unchanged efficiency target for TI services of 1.5% per annum.

509. Some year-on-year changes in efficiency in the case of TI services, is to be expected. This is because cost rationalisation programmes occur periodically with investment in some years followed by cost savings in later years. For example, the property rationalisation programme and the PDH compaction programme impacted on TI costs. Year to year fluctuation in unit costs are to be expected and this is not a good reason to reject this evidence. Short term fluctuations can be overcome by taking an average over a number of years to derive a reasonable estimate.

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<sup>54</sup> Annex 9, Ofcom, Leased lines charge control statement, July 2009.  
<http://stakeholders.ofcom.org.uk/binaries/consultations/lcc/statement/lccannex.pdf>

<sup>55</sup> A12.79, Ofcom, BCMR Statement, March 2013.



## Management accounting information

510. Ofcom estimates that historical estimates of efficiency gains relating to TI services are between 4.5% and 8.5% per annum from 2011/12 to 2013/14, and claims that the forecasts show that between 5% and 10% efficiencies are expected in both 2014/15 and 2015/16. Here we examine the evidence that is specific to TI services.
511. It appears from Annex 8 of the Consultation document that Ofcom has used the first set of PVEOs submitted and not the updated version dated in December 2015. It also appears that Ofcom has not made any adjustments to take into account the issues we have raised previously concerning the calculation of the E term in the PVEO analysis. This term should be interpreted with caution to avoid double-counting especially since the model already uses CVEs to capture economies of scale as volumes grow and includes separately costs reductions attributable to volume declines. As with our response to Ethernet services on this matter, we have our concerns regarding the use of the unadjusted data as well as the way PVEOs are intended for internal management planning. Both these factors unequivocally mean that they are likely to be overstated if used for setting an efficiency target in a charge control.
512. As part of the PVEO submission that Ofcom has used for its assessment, BT made aware to Ofcom that  $\propto$ , and that " $\propto$ ".<sup>56</sup> Furthermore, some of the cost reductions shown in the Cost Transformation represent "external cost recovery from successful dispute resolutions with other operators" whilst others represent "recovery of past under-billing for services", and should therefore be excluded from any efficiency assessment. It is therefore unclear how Ofcom has arrived at the range of 4.5% to 8.5% efficiency assumption that would be relevant for TI services.
513. BT also presented to Ofcom its view of PVEOs, which showed an implied efficiency over the 4 years between 2014/15 and 2017/18 is  $\propto$  on total costs for BT Wholesale, significantly below the 5% to 10% range suggested by Ofcom. Ofcom have misinterpreted the PVEO and used an efficiency target that is much higher than consistent with BTW's PVEO forecasts. Deloitte explain the limitations of using BT's internal PVEO analysis in their report.<sup>57</sup>
514. We note again that any historic assessment of efficiency should explicitly consider whether it is reasonable to assume that past rates of efficiency gains can be expected to continue in the future. This is especially important where past efficiency gains include an element of "catch-up". BT considers that unless it can be demonstrated that BT is "inefficient" compared with a benchmark, efficiency challenges should be limited to the rate of "frontier shift". In aggregating both catch-up and frontier-shift into a single figure Ofcom has failed to consider this important factor in setting a reasonable efficiency target.
515. Ofcom's analysis of historic and forecast PVEOs for TI services have not focused on what is feasible for the TI market, and have used efficiency gains measured at a divisional level that relate to a wide variety of services. As Deloitte identifies, one of the key concerns is that efficiency initiatives vary significantly across products, and that applying a uniform adjustment "*may lead to a significant overestimation of achievable efficiencies*".<sup>58</sup> FTI<sup>59</sup> make similar observations about the suitability of using PVEO analysis in the estimate of an efficiency target.

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<sup>56</sup> BT response to LLCC 1<sup>st</sup> s135 tranche 2, 29 August 2014.

<sup>57</sup> See Section 3, Deloitte report "BCMR 2015 – Efficiency estimation – Review of Ofcom's approach.

<sup>58</sup> Deloitte, BCMR 2015 – Efficiency estimation. Review of Ofcom's approach. 2015.

<sup>59</sup> FTI report August 2015, BT Leased Lines: Efficiency incentives, section 4.

## Consistency with alternative sources of information

516. The TFP analysis already described in our response to Q6.3 on Ethernet efficiency is also relevant here as it shows the extent to which efficiency has been improving. Given the maturity of the TI market, we consider the lower end of the range is more appropriate, since there is limited scope for further development and innovation in these services that would drive improvements in the underlying technology. This is confirmed by FTI's observation<sup>60</sup> that

- *"electricity distribution and transmission sectors are most comparable with BT's TI services... and recent determinations.... Are around the 1% region. This is not inconsistent with the previous BT BCMR of 1.5% efficient frontier movement for BT's TI services".*
- *"As of 2006, a frontier shift of 3% was estimated for the Royal Mail... [T]here was significant scope for technological efficiency gains".*
- *"Recent water determinations in the water industry have estimated an industry frontier shift lower than 1%... the water industry has been subject to charge controls for over two decades... the potential for efficiency gains are much lower... than most telecoms technologies".*

517. Again, in terms of catch-up evidence suggests that there has been a closing of the gap between BT and the frontier benchmark, and this is supported by the unit cost trend analysis. As such, we consider that historic assessments of BT's performance should be adjusted for this before adopting it as a guideline for the potential for future efficiency gains. This would be consistent with Ofcom's previously adopted approach.

518. A more balanced set of evidence is presented in the table below, using evidence from a wide range of sources.

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<sup>60</sup> FTI report August 2015, BT Leased Lines: Efficiency incentives.

**Table 23: Comparison of evidence on TI efficiency**

<b>Source</b>	<b>Assumption</b>	<b>Comments</b>
<i>Unit cost trend analysis</i>	1% to 2%	Excludes one-off items and taking into account cost allocation changes
<i>TFP analysis of telecoms sector</i>	0.5% to 3.0%	Cluster of estimates around 2%
<i>TFP analysis of ICT sector</i>	2.0% to 4.0%	Higher rate of TFP growth not consistent with a market that has been in sharp decline and expected to continue to do so
<i>Frontier shift assumptions made by other sector regulators</i>	0.25% to 3.0%	Consensus of 1% frontier shift
<i>BT's relative position</i>	BT has made catch-up improvements over time, and is now close to the frontier	
<i>Historic PVEO analysis</i>	1% to 2%	Does not exclude historic catch-up, so could overstate potential for future efficiency gains
<i>Forecast PVEO analysis</i>	1% to 2%	Identifying specific Cost Transformation programmes relevant to TI services
<b>Range based on above evidence</b>	<b>1% to 2%</b>	

Source: BT calculations

519. Ofcom's assumption of a 4% to 7% p.a. efficiency for TI services is out of line with evidence available on past unit cost analysis of the RFS where overall the evidence points to a range of 1% to 2% p.a. efficiency as being reasonable for TI services. This is based on a wide range of sources, both internal and external to BT, both on a historic as well as on a forecast basis, and that it reflects the consensus view of where the market is heading. For these reasons we believe that the efficiency target for TI services should be unchanged at 1.5%.

**Question 7.4: Do you agree with our proposals in relation to starting charge adjustments for TI services? If not, what alternative would you propose and why?**

#### **The application of starting charge adjustments to TI control**

520. Notwithstanding BT's comments in response to Q4.1 above regarding the change in approach to start price adjustments, we now comment on Ofcom's calculation of the start price adjustments to apply to TI controls.
521. Should Ofcom still persist with its proposals it is imperative that errors in the application and estimation of the start price adjustments are corrected and the start price adjustment, rather than 7.75% as proposed, should be no more than 0.65% (not inclusive of applying the specific cost drivers noted by Ofcom as required for Final Statement – this is likely to further reduce the maximum start price adjustment significantly).

522. In addition to the above, BT disagrees with a number of the costs that Ofcom asserts are incremental to unregulated services (outlined in table 6.4). In summary, apart in the main from insurance costs, none of the costs identified by Ofcom have the types of direct cost drivers which would constitute a direct cost driver. It is imperative that Ofcom takes account of this evidence and reduces the start price adjustment accordingly. These issues are covered in detail in BT's CAR response and the accompanying FTI and EY reports in relation to Ofcom's analysis of general overheads.
523. The principle underpinning Ofcom's start charge adjustment is to adjust for changes and errors in cost attributions, which moved costs from regulated to unregulated markets, to the extent those errors and changes, impacted its forecast of costs in the 2013 LLCC. As outlined in paragraph 67 above if the forecast cost in the 2013 LLCC was impacted by changes in Ofcom's modelling approach for such changes a price glide should be adopted.
524. There are four elements in Ofcom's estimate of start price adjustments; Backhaul and core duct allocation to 21CN plant groups, duct , BT Wholesale transfer charge, General Overheads (CAR proposals - BT has responded in detail separately), volume error correction – TI specific and 2013/14 RFS method changes.
525. We noted above (paragraph 239) that Ofcom estimates the impact of the changes on the start prices with reference to 2013/14 costs forecast forward to 2016/17. The starting charges are a function of Ofcom's base year costs in the 2013 LLCC (2011/12 was the base year) and Ofcom's 2013 LLCC model i.e. nothing to do with 2013/14 costs or Ofcom's new 2015 LLCC model. Ofcom's approach therefore uses the wrong numbers in its calculations. The most accurate approach available has been adopted by BT in this assessment, namely using Ofcom's 2013 LLCC model to forecast the end year FAC after adjusting the 2011/12 LLCC base year data to account for the four identified factors. This new 'corrected' forecast is compared with Ofcom's original forecast to assess the extent to which the four factors affected its cost forecast and thereby starting charges. It is important that Ofcom's modelling uses the correct numbers when estimating the impact of the four factors on the 2013 LLCC.
526. Table below.

**Table 24 – Corrected Start Price Adjustments**

TI markets	Ofcom proposal	BT view	Explanations
Backhaul and core duct allocation to 21CN PGs	1.36%	0.00%	This should be in a glide path as costs are mainly reallocated to AI.
BT Wholesale transfer charges	0.91%	0.65%	Ofcom should calculate the % adjustment to cost by reference to 2011/12 base year values used in the 2013 LLCC.
General Overheads	1.85%	0.00%	BT's overheads allocation methodology is consistent with the RAP, and Ofcom has not demonstrated BT's approach is 'clearly inappropriate'.
Volume error corrections – TI specific	2.50%	0.00%	The reallocation of Featurenet to residual services affects both revenues and costs so would not have significantly impacted on the charge control.

13/14 accounting changes	1.13%	0.00%	These accounting changes were introduced in 2012/13 and so did not affect the 2011/12 base year values used in the 2013 LLCC
<b>Total</b>	<b>7.75%</b>	<b>0.65%</b>	

- There were a number of volume errors and the only one which resulted in costs being moved into residual services was from moving Featurenet services into Residual Markets. This resulted in volumes, revenues and costs being moved to residual services in 2013/14. The cost adjustment should therefore not be considered in isolation because of the associated impact on revenues. BT considers that this adjustment should be made via the glide path.
- The changes in accounting treatment in 2013/14 did not affect costs in the 2011/12 base year costs used to set the 2013 LLCC. There is therefore no reason why these changes should be reflected in the starting charge adjustments.

### **Backhaul and core duct**

527. The backhaul and core duct allocation adjustment removes cost that should have been allocated to 21CN plant groups. This removes costs from TI services into markets that use 21CN equipment, mainly into the Ethernet (AI non-WECLA) markets. If a reduction in TI start charges is made then a corresponding increase should be made to Ethernet. BT considers it would be more appropriate to adjust for this via a glide as the costs moved to residual markets is insignificant. Ofcom has not demonstrated that this moves costs from regulated to unregulated markets, a prerequisite for a start price adjustment.

### **BT Wholesale transfer charges**

528. The error in the BT Wholesale transfer charges reduces TI costs, but Ofcom has calculated the % difference in total costs by reference to the 2013/14 RFS rather than the 2011/12 RFS used to set the last charge control. This reduces the impact of the error to 0.65% of total costs.

### **General Overheads (Ofcom's CAR proposals)**

529. Ofcom used a proxy attribution method, based on Previously Allocated Costs (PAC), to estimate the impact of its general overheads proposals. Its stated intention is that in the Final Statement it will correct the proxy estimate by using the specific cost drivers it proposes are better in the CAR. The impact of applying the 'correct' cost drivers rather than PAC is almost certainly to reduce the general overhead portion of the start charge adjustment further.
530. However, as BT has explained in detail in its response to the Consultation on the "Review of BT's Cost attribution methodologies", Ofcom has not demonstrated that the cost allocation methodology was 'clearly inappropriate' in relation to the Regulatory Accounting Principles. There is therefore insufficient justification for making this adjustment to starting charges.

### **Volume correction TI specific**

531. There were a number of volume errors and the only one which resulted in costs being moved into residual services was from moving Featurenet services into Residual Markets. This resulted in volumes, revenues and costs being moved to residual services in 2013/14. The cost adjustment should therefore not be considered in isolation because of the associated impact on revenues. BT considers that this adjustment should be made via the glide path.

## 2013/14 Method changes

532. The changes in accounting treatment in 2013/14 did not affect costs in the 2011/12 base year costs used to set the 2013 LLCC. There is therefore no reason why these changes should be reflected in the starting charges adjustments.

## Conclusion on starting price adjustments

533. As explained above and in its response to the CAR consultation, BT has demonstrated that less than 1% of a proposed 7.75% starting price adjustment is supported by the facts when considering the information that was used to set the 2013 LLCC. It is inevitable that with the benefit of hindsight some improvements could be made to data used in past decision making. However, unless the difference is significant this should usually be adjusted through the glide path rather than as a one-off start price adjustment. As the adjustment amounts to less than 1% of the cost base used in the 2013 LLCC, BT maintains that it would be better to incorporate this into the glide path rather than to introduce a starting price adjustment for such a small adjustment.

***Question 7.5: Do you agree with our proposals in relation to the value of X for TI services. If not, what alternative would you propose and why?***

534. Ofcom proposes that TI charges should be reduced by 7.75% on 1 April 2016, followed by a charge control of CPI-12.25% per annum over the 3-year charge control.<sup>61</sup> This is a radical departure from the current TI charge control of RPI + 2.25% due to the following factors:
- Ofcom has proposed a number of adjustments to BT's base year costs which are used to justify the starting charge adjustment.
  - The high return on capital employed (ROCE) in comparison with BT's Weighted Average Cost of Capital (WACC).
  - An increase in the efficiency factor from 1.5% per annum to 5% per annum.
  - A new policy on the treatment of assets within Ofcom's model by introducing the concept of "asset disposals" where assets are to be sold on the secondary market or are to be redeployed within the business, where volumes are falling rapidly.
535. As set out below, BT considers that the significant change in the price profile proposed for the TI services is not justified by the evidence put forward by Ofcom. Instead Ofcom should continue with the current charge control that has seen significant volume declines in legacy TI services as end-users have migrated their business connectivity requirements onto more modern technology and set a TI charge control at a rate broadly similar to the current control of CPI + 2.25%.
536. Table 25 below summarises BT's views of how Ofcom should modify their charge control calculations for TI services, together with the impact on the X.

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<sup>61</sup> See Table 1.1 of 2015 LLCC Consultation

**Table 25 – BT's proposed adjustments to Ofcom's TI Charge control**

Issue	BT proposed treatment	Impact £m on final year FAC	Impact on X
HON	Applying a HON approach to SDH costs consistent with the treatment in WBA (i.e. increasing NRC:GRC ratio to 50% and applying a 13 year depreciation life.)	✂	+3.3%
Asset disposals	Asset disposals should not apply to fixed common costs. If an AVE is applied, any averaging should be using NRC (the AVE by component is calculated using GRC weights and so is not appropriate for use in considering asset disposals.)	✂	+8.0%
Efficiency	Ofcom has not adequately justified the increase in the efficiency assumption for TI to 5%. This would mean BT does not meet benchmark efficiency levels. A 1.5% figure should be used consistently with "frontier shift" for a legacy technology.	✂	+1.5%
Disaggregated CVE	Ofcom has used an average CVE by component to forecast operating cost. Applying CVEs to each cost sector allows common cost to be properly identified.	✂	+3.5%
Cost Adjustment	The change to treatment of general overheads has not been adequately justified.	✂	+1.0%

537. These issues are explored in more detail below, or in the case of Cost Adjustments in the response to Question 7.4 above.

**A Hypothetical Ongoing Network (HON) approach should be used because BT's reported ROCE for TI services is artificially high due to life-cycle effects**

538. TI services have a high reported ROCE, in large part due to these services being at a late stage in the product life-cycle. This means that assets are approaching the end of their useful economic life and therefore appear as highly depreciated, with a low asset value and, in some cases, having a lower depreciation charge due to assets being fully depreciated. This means that the accounting values are not commensurate with the economic value of the assets leading to an underestimate of the true economic cost of providing TI services.

539. The impact of the late stage in the life cycle can be observed in Table 26 below which shows NRC/GRC ratios, the associated depreciation and implied asset lives for the proposed TI basket.

**Table 26**

*Source: BT analysis of low bandwidth TI costs, 2013/14 RFS*

540. The overall NRC/GRC ratio for the TI basket is 18%, considerably below what would be expected in a competitive market in a “steady state”. The consequence of this is that the denominator of the ROCE calculation (the NRC) is understated compared with what would be expected in a fully competitive market (where the NRC would be around 50% of the GRC). This leads to an increase of the reported ROCE. This is exacerbated by the effect on depreciation of fully depreciated assets, where depreciation based on accounting rules is too low compared with the economic value. It is clear that the assets which are still in use should have an economic value and so should have both an asset value and a depreciation. The high ratio of GRC / Depreciation, also known as the implied asset life indicates that the depreciation charge is too low, as the asset lives are far too high for a normally functioning competitive market.
541. For example, transmission assets show a 45 years implied asset life compared with a book life of between 3 and 25 years for transmission cable, and between 2 and 13 years for exchange equipment.<sup>62</sup> A similar situation arises for Other Network Equipment. This means that the depreciation costs are much lower than in a steady state and this inflates the profit figure. These two factors (a low NRC and a low depreciation figure) combine to result in a reported ROCE figure that is substantially higher than BT's WACC due to this life-cycle effect. It is certainly not conclusive that a high ROCE means that prices are too high, as Ofcom itself acknowledges in the BCMR consultation.<sup>63</sup>
542. In a report we have commissioned from external consultants, DotEcon explain that ROCE measures are unreliable as an indicator of economic profitability where assets are largely depreciated, a situation that Ofcom has itself acknowledged on previous occasions such as the ISDN 30 charge control.<sup>64</sup>
543. The effect of making a “hypothetical ongoing network” (HON) adjustment is very significant. For example, if an adjustment were made to bring the transmission costs in line with the HON approach in the WBA market review, adopting a 13-year asset life, the MCE would increase by £317m and the depreciation charge by £44m, lowering the ROCE to below 20% in 2013/14. At this level, the ROCE would be consistent with what might be expected given the out-performance in both volumes and efficiency in the current charge control.
544. The use of a HON is not new in communications markets. Similar circumstances existed in previous charge controls, such as the 2009 NCC, the 2013 WBA and the ISDN30 charge controls.<sup>65</sup> In these controls Ofcom adjusted the asset values and depreciation to reflect values of a HON to ensure that prices were not set too low to distort investment incentives in the market as customers migrated to newer technology.
545. BT considers a similar approach is appropriate for TI services, as migration to newer technologies such as Ethernet should not be discouraged due to inappropriately low pricing and

<sup>62</sup> See note 3 of BT's 2015 Annual Report

<sup>63</sup> See A22.19 and A22.23 in 2015 BCMR

<sup>64</sup> See Paragraph 3.1 of Ofcom's April 2011 Statement Price controls for wholesale ISDN 30 Services.

<sup>65</sup> See A22.3 of the 2009 NCC statement and 7.8 of the 2014 WBA statement.



sending the wrong economic signals to the market. This is explored in more detail in the Plum Consulting and DotEcon reports.

546. Ofcom rejects the use of a HON on the grounds that this would lead to the over-recovery of assets used to supply TI services<sup>66</sup>. However, this approach places more less value on seeking to set prices consistent with a competitive market and is an approach that moves away from incentive regulation towards a rate of return approach. This misses the key point that services outside the TI market are affected by such an approach. By pricing TI services below the forward-looking economic costs— investment in, and migration to, newer technologies such as Ethernet, are adversely affected by setting TI prices too low. This also has the long term of prolonging the use of TI services and potentially delaying the closure of the TDM platforms. The change from modest price rises to significant price reductions may also serve to increase inertia in the TI market as business customers are more likely to review their buying decisions if prices are rising than falling.<sup>67</sup>

### **Asset Disposals**

547. Ofcom has introduced a new “asset disposal” approach which states that BT should be able to dispose of its assets by removing them from the network and selling them on the secondary market.<sup>68</sup> This is impossible in the case of duct (which is not separable) and impractical in the case of fibre, where individual fibres within a cable cannot be separated nor can they be removed. Similarly, accommodation will only become vacant if a rack can be removed in its entirety, for example.
548. It is only possible to remove equipment from the network if all circuits using the equipment are no longer in use. What Ofcom is suggesting is that BT undergoes a continuous network rationalisation to minimise the network equipment deployed, without considering the practicality or the cost of such an approach. In reality this would require significant network planning effort to implement, would cause service disruption to customers, and would involve the cost of reconfiguring the network and rearranging circuits. In practice, BT only undergoes a network rationalisation programme when it is cost-effective to do so. TI has not yet reached this point.
549. Ofcom says that it might be possible for assets to be redeployed or reallocated elsewhere.<sup>69</sup> However, other TDM services using the same legacy SDH transmission technology, i.e. PSTN voice services and 20CN broadband services, are also in decline. Whilst there is some scope for the reallocation of costs between these services, this is driven by changes in relative volumes, not by changes in total volumes. Because all legacy volumes using the SDH platform are in decline, the scope for reallocation of costs is far smaller than assumed in Ofcom's model. Other shared assets, such as duct and fibre, cannot necessarily be immediately redeployed, due to network planning processes, and it is unreasonable to assume instantaneous reallocation.
550. The allocation of duct and fibre is generally driven by the volume of muxes attached to the line systems. This means that the extent of any reallocation is driven by the volume of muxes that can be ceased. BT has conducted an initial feasibility study to examine the potential for rationalising the SDH platform, which estimates that a maximum of 3% of the existing SDH

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<sup>66</sup> See A5.13 of the 2015 LLCC consultation.

<sup>67</sup> The impact of Ofcom's proposals on migration incentives and long term efficiency are addressed in detail in the Plum consulting report attached as annex K.

<sup>68</sup> See footnote 41 to paragraph A6.41 2015 LLCC appendices.

<sup>69</sup> Reallocation of costs is also mentioned in footnote 41, *ibid*.

muxes could be removed from the network by 2020. This is considerably lower than indicated by Ofcom's modelling.

551. It is also the case that the reduction in SDH muxes will not necessarily free up accommodation because the removal of a mux may not free up a "usable" element of the exchange, as the vacant rack may be interspersed with other network equipment. In short, the actual management of the network varies considerably from the assumptions made in the LRIC model. Ofcom's model assumes that at any time the network can be reconfigured to optimise the equipment necessary to deliver the services demanded (as it is based on the LRIC model which assumes all costs can be varied) whereas the actual network will have been dimensioned to deliver historical volumes and cannot be rearranged to exactly match the current level of circuits without incurring considerable network planning and reconfiguration costs. Not only does Ofcom's model assume that the network can be reconfigured, but there is no allowance for the cost that would be incurred to achieve this.
552. It is important to note that the assets cannot be redeployed or reallocated elsewhere to allow the NRC costs used by TI services to reduce. As other TDM services using the same legacy SDH transmission technology, namely PSTN voice services and 20CN broadband services, are also in decline, this limits the scope for any reallocation of costs.

**Ofcom has used GRC based AVEs and applied these to NRCs – this overstates the extent that asset disposals or cost reallocations are possible**

553. Notwithstanding whether the proposal to introduce asset disposals is reasonable or not, we consider that Ofcom has used the wrong AVE values to adjust the asset values. BT has examined the make-up of the total asset value within the basket, as shown in Table 3 below. This shows the AVE of each asset type (for example, 0.12 for cable, 0.10 for duct, etc). This allows the assets to be divided into "fixed common costs" and "variable costs". In practice, it is only the variable cost element that could be "disposed of" as volumes decline, as the fixed common costs are, by their nature, invariant with volumes.

**Table 27 ✂**

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554. Even if the asset disposal approach was reasonable, Ofcom has used an AVE based on the weighted average of the GRC of assets. As assets have different NRC:GRC ratios, this approach has inadvertently distorted the calculation. The AVE should to be weighted by NRC to consider "asset disposals". The high proportion of duct and fibre in the remaining NRC means a significantly lower AVE should be used.
555. Table 27 above shows that the weighted average AVE is ✂ when using NRCs as a weight, which compares with AVEs ranging from ✂ for the various TI components.<sup>70</sup> This results in Ofcom's model removing too much NRC by applying an excessively high AVE. For example, when considering cable and duct assets, much of the cost of these assets is a fixed common cost and there is therefore less variable cost that can be reduced as volumes decline.
556. Ofcom describe their approach to the treatment of fixed common costs in A11.11 of the consultation.

<sup>70</sup> see Figure A8.30 in the LLCC consultation annexes.

*“...Our modelling approach assumes that the total amount of fixed and common costs recovered from modelled services in the base year remains the same throughout the control, adjusted only for changes in efficiency and inflation. ...”*

557. Table 27 above shows that of the £X of base year MCE, around £X relates to fixed common assets<sup>71</sup> and only £X is variable. Applying the asset disposals element to the variable assets only, would lead to a total value of disposals of around £X. Ofcom's model forecasts MCE in 2018/19 at £X. Ofcom has therefore implicitly reallocated these common costs elsewhere without considering if these costs can be recovered elsewhere or how these costs would affect charge controls in other regulated markets.

558. The TI basket MCE should be considerably higher if the disposals approach were applied to the variable cost element only, requiring the value of X to be adjusted accordingly. This is because Ofcom's model has effectively reallocated nearly all the fixed common costs to un-named services outside the TI market.

**Cost reduction targets, and in particular the efficiency target of 5% per annum, are unreasonable**

559. The proposals require BT to achieve very substantial cost reductions in TI costs in order to achieve a return on capital employed in 2018/19 equal to the BT WACC. The rate at which costs must decline has not been justified in the June 2015 LLCC Consultation.

560. Ofcom's own modelling shows that costs must fall more rapidly than volumes, as shown in Table 28 below. This is unrealistic given that TI services are operated over a legacy network with limited scope for further cost reductions over and above those already included through the operation of the CVEs on falling volumes.

**Table 28 ✂**

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561. The revenue figures show the forecast revenue with prices held flat at the base year values. This model shows the “gap” between revenue and cost that need to be closed through the implementation of the charge control, which requires a £X or X% reduction in prices.

562. The Ofcom model assumes that as volumes reduce, costs can be reduced in accordance with the long-run cost-volume-elasticity (or CVE). With volumes declining by up to 20% per annum, the modelling assumes cost reductions at the rate of over 15% per annum.<sup>72</sup>

563. It is unreasonable to assume costs can be reduced by a further 5% per annum from the efficiency factor without providing any evidence that BT is inefficient or where the efficiency improvements can be expected to be achieved. As BT explains in the response to question 7.3 above, the efficiency assumption for the legacy TI basket should be 1.5% per annum.

564. Ofcom's modelling already requires substantial cost reductions for TI services due to the operation of the CVE on falling volumes. Any efficiency challenge is added on top of these cost

<sup>71</sup> The fixed common costs are calculated taking the mean capital employed in the base year and multiplying by the factor (1-AVE). Given that the AVE is based on the LRIC value for the variability of assets with volumes this calculation results in an estimate of the fixed common costs that have been allocated to the TI markets in the base year.

<sup>72</sup> Figure A8.30 of the 2015 LLCC Annex shows the CVE TI components range from 0.7 to 0.9.

reductions in Ofcom's modelling. Ofcom has failed to take into account the possibility of double-counting of the capability to remove cost through the compounding of both the CVE and efficiency factors in Ofcom's model.

565. Ofcom's cost modelling implies that operating costs will fall more rapidly than volumes, causing a reduction in unit cost. This contrasts with the expectation as expressed in the Competition Commission hearing into the appeal of the 2013 LLCC that declining volumes in a market where there are significant fixed and common costs would be expected to lead to an increase in unit costs, as the fixed costs are spread across a declining service volume.

*"In its Defence, Ofcom said "It is well-known that economies of scale are significant in the telecommunications sector, and it is reasonable to expect some rise in unit costs in a declining service, just as it is reasonable to expect falling unit costs as market grow".<sup>73</sup>*

566. Ofcom's modelling therefore produces results contrary to what would normally be expected, suggesting that the efficiency target is too demanding.

#### **Effect of using an average CVE by component compared with a CVE by cost sector**

567. BT examined the overall costs for services within the TI basket and how these costs might be analysed into fixed common and variable elements by using CVE value by cost sector (as opposed to a weighted average figure). This shows that the total cost forecast would be higher than assumed by Ofcom if a CVE was applied to each cost sector. This is because the CVE would change over time as the cost mix changes, which is not reflected in the cost model. BT recalculated costs using the efficiency factor of 5% applied to the 2013/14 costs forecast over five years, and applied the CVE appropriate to each sector. This results in an overall cost forecast that is £36 higher in 2018/19 than Ofcom's model, a significant increase in overall costs.

**Table 29 – Analysis of operating costs by sector**

Sector £M	13/14	BT CVE	Common costs = (1-CVE)* sector costs	Variable costs	Ofcom forecast	BT forecast using Ofcom's efficiency
Accommodation	3	3	3	3	3	3
Gen Management Other	3	3	3	3	3	3
Maintenance	3	3	3	3	3	3
Provision Installation	3	3	3	3	3	3
Other (x17 cost sectors)	3	3	3	3	3	3
<b>Total</b>	3	3	3	3	3	3

568. BT considers that Ofcom has failed to consider a number of key factors:

- BT is unable to remove items of legacy equipment until the last circuit using the equipment is removed. This means that there is a considerable time lag between volume reductions and the ability of BT to rationalise network costs. This is particularly relevant for

<sup>73</sup> See para 2.100 Competition Commission Determination Verizon and Vodafone v Ofcom, 12 November 2013.

accommodation and power costs. This means that there is a time-lag between volume decline and associated cost reduction.

- The costs cannot be removed continuously, but rather must be done through rationalisation programmes. These programmes are costly to implement and typically will be done when volumes have reduced sufficiently to make it economic to reconfigure the network. The model currently assumes this activity can be done without additional cost.
- BT has considered the feasibility of reducing the size of the SDH platform as part of its cost transformation activity. Initial plans indicate that by 2020 the SDH platform could be reduced in size by between 30% and 40%, reducing the volume of equipment by approximately 30% per annum. This is substantially less than the rate of cost reduction assumed in Ofcom's model. This illustrates the difficulty of achieving a LRIC based decline in costs in the short term when much of the network cannot be varied due to the need to maintain the existing geographic footprint and continuing to deliver services over the existing assets. As volumes decline, the equipment is used by fewer services and this would be expected to increase unit costs, contrary to what is shown in Ofcom's model.
- A large part of the TI legacy platform is based on the TDM SDH transmission platform which is shared between PSTN Voice, PPCs and 20CN Broadband services. All three legacy services are subject to volumes decline, meaning there is limited scope to reallocate costs from TI services to other products using the SDH platform. This means the capability for "disposals" as suggested by Ofcom is much more limited, with any reallocation driven by the relative rate of decline of the legacy TI, PSTN voice and 20CN broadband services, and not at the rate of decline of TI alone.

569. This means that Ofcom's approach of using the value of the CVEs from BT's LRIC model, which takes a long run view of costs and assumes the network and cost structure can be varied fully, overstates the rate at which costs can be reduced as volumes decline. It is clearly more challenging to combine the CVE based reduction in costs, even without taking on a further efficiency challenge of 5% per annum.

**Ofcom's proposals for TI services reduce prices in an unjustified way, damage incentives to migrate and will lead to higher costs long term for the industry as life of TI services is artificially prolonged**

570. There is no need to change the current charge control, which allows gradual increases in TI prices encouraging migration to more modern and, in many cases, lower priced Ethernet services. This is consistent with the steep decline in TI volumes accompanied by a substantial increase in Ethernet volumes during the current charge control.

571. BT has demonstrated above that:

- BT's ROCE for TI services is not excessive but is the result of assets approaching the end of their depreciation lives.
- Ofcom's model should adopt a HON approach to valuing transmission assets so that the correct economic cost can be included and avoid distorting incentives to migrate services to newer technologies.
- It is overly simplistic to assume that BT can dispose of fixed assets. If the alternative is to reallocate the assets to other markets then Ofcom has inadvertently reallocated fixed

common cost away from TI services without considering how, if at all, these common costs can be recovered.

- If the asset disposals approach is to be used, the AVE should be weighted by NRC (and not GRC) as the adjustment is made to NRC.
- The scale and extent of reduction in operating cost is unrealistic. BT has explained that some costs are “sticky downwards” and the CVEs used are too high, and that the increase in efficiency factor is unjustified.
- Nearly all the elements in the starting charge adjustments do not meet Ofcom's criteria for an adjustment.

572. The consequences of Ofcom's current TI proposals will be very damaging. TI prices will no longer see a widening differential with Ethernet prices, and this will reduce incentives for efficient migration. As a consequence, it would be expected that migration away from TI services will slow and customers will continue to use TI services for longer than they would otherwise have done. The impact on migration incentives and the longer term effect on economic efficiency is addressed in the Plum Report at Annex K.

573. Ofcom's TI charge control proposals focus too much on looking to achieve a short term price cuts to customers of TI services at the expense of longer term dynamic efficiencies in the delivery of business connectivity services and in ensuring efficient migration between legacy TI services and more modern alternatives.