

Business connectivity market review – Volume 2

Proposed leased lines charge control

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1. Introduction

- 1.1 The first volume of this consultation sets out our assessment of market power in the provision of leased lines and our proposed remedies to address SMP.¹ In this volume we set out our proposals for a sub-set of these remedies: charge controls on BT’s leased line services. This includes our overall objectives and approach, the design of the proposed charge controls, their level and how they will be implemented.
- 1.2 In Volume 1 we propose two product markets for leased lines with separate geographic markets based on the nature and degree of network competition. The below table sets out the proposed markets and SMP findings, with our proposed pricing remedies.

Table 1.1: Summary of pricing remedies for the CI Access and CI Inter-exchange markets in the UK excluding the Hull Area

	Inter-exchange market			Access market			
Operator:	BT Only	BT+1 other	BT+2 or more	BT Only	BT+1 other	BT+2 or more (HNR areas)	
Bandwidth						Outside CLA	CLA
1 Gbit/s and below	Cap at current prices for stability		None	Cap at current prices for stability		Fair Pricing	None
Over 1 Gbit/s (VHB)	Safeguard cap at current prices		None	Safeguard cap at current prices		Fair pricing	None
Dark Fibre, any bandwidth	Price at cost	None	None	None	None	None	None

¹ <https://www.ofcom.org.uk/consultations-and-statements/category-1/business-connectivity-market-review/>.

Summary of proposals

Key proposals for charge controls on BT

Our key proposals are:

- a charge-controlled basket of active services at 1 Gbit/s and below, covering both Access and Inter-exchange markets, with charges based on the average price of services in the basket for the prior year and capped at CPI-CPI;
- a charge-controlled basket of active VHB services at above 1 Gbit/s, covering both Access and Inter-exchange markets, with charges as at 1 October 2018 capped at CPI-CPI; and
- charge-controls on dark fibre services in the CI Inter-exchange connectivity market for connections from BT Only exchanges, with charges calculated on the latest available cost information and capped at CPI-CPI.

Our proposals also include controls on sub-baskets and ancillary services.

- 1.3 In Volume 1 we propose that BT’s market power gives it the ability and incentive to set prices that could restrict competition and harm consumers. We also note that we plan to undertake a comprehensive review of wholesale access markets by April 2021, bringing together our review of business and residential markets for the first time. Given current price levels, and that this review covers the relatively short period to March 2021, we consider that keeping prices stable strikes the right balance between protecting consumers from high prices (while allowing BT the opportunity to recover its efficiently incurred costs) and providing certainty and stability as we transition to the introduction of new, long-term downstream regulation for business and residential markets.
- 1.4 For active services at 1 Gbit/s and below, we propose that a charge control at CPI-CPI best balances these two objectives. We have modelled costs over the review period and our analysis indicates that CPI-CPI is within our range of model outputs. We do not believe that any potential over-recovery of costs by BT outweighs the benefits of pricing stability or that there are significant risks of cost under-recovery.
- 1.5 For active VHB services, we have not undertaken similar modelling work. We expect demand for these services to continue to grow as networks expand and data consumption increases. Our proposals for duct and pole access will lead to an increase in competition, which is likely to focus on higher speed services. We are concerned that BT may selectively raise prices for active VHB services where competition is weak or non-existent and leverage higher returns to reduce prices where competition is likely to emerge. To prevent this, we propose a safeguard CPI-CPI cap at current prices.
- 1.6 In Volume 1 we also propose the introduction of dark fibre for inter-exchange connectivity for all connections from exchanges where BT has no competition for backhaul services.
- 1.7 As well as protecting consumers from high prices, our dark fibre proposal will promote investment by reducing barriers to network expansion and supporting competition in areas

where alternative network build would otherwise be less likely. We propose to set the charges for dark fibre based on the latest available cost information. Thereafter, we propose capping prices at CPI-CPI. We do not believe there would be a material misalignment of cost and revenue under this approach, and it has the advantage of being consistent with our proposed controls on active services and our overall objective of pricing stability.

- 1.8 The below tables set out our proposed charge controls on active services at 1 Gbit/s and below, active VHB services, relevant ancillaries services and inter-exchange dark fibre services.

Table 1.2: Proposed baskets for active services at 1 Gbit/s and below

Baskets	Services within scope	Level of control
1 Gbit/s and below services baskets	Connection, rental and Main Link charges for Wholesale fibre-based Ethernet services at 1 Gbit/s and below Interconnection services and Cablelink Ethernet ancillary charges (excluding accommodation, Excess Construction Charges and Time Related Charges) to support Ethernet services at 1 Gbit/s and below	CPI-CPI
Cablelink sub-basket	Cablelink services	CPI-CPI
Sub-cap on all charges	Each individual service within this basket	CPI+5%

Table 1.3: Proposed basket for active VHB services

Baskets	Services within scope	Level of control
VHB services basket	Connection, rental and Main Link charges for Wholesale fibre-based Ethernet and WDM services at VHB Ethernet ancillary charges (excluding accommodation, Excess Construction Charges and Time Related Charges) to support Ethernet and WDM services at VHB	CPI-CPI
Sub-cap on all charges	Each individual service within this basket	CPI+5%

Table 1.4: Proposed baskets for accommodation services, Excess Construction Charges (ECCs) and Time Related Charges (TRCs)

Ancillary service	Baskets	Services within scope	Level of control
Accommodation services, i.e. to rent space in BT Exchanges	Accommodation services	Access Locate Administration Fee	CPI-CPI
Excess Construction Charges	Direct ECCs	Blown fibre, cable (fibre or copper) including any jointing required, blown fibre tubing in duct, internal cabling, overblow services, fibre cable and survey fee/planning charges	CPI-CPI
	Sub-cap on all charges	Each individual Direct ECC	CPI+5%
	Contractor ECCs	Construction activities that Openreach provides through an external contractor	Basis of charges obligation
Ethernet Time Related Charges	Ethernet TRCs	Each individual relevant Ethernet TRC	CPI-CPI

Table 1.5: Indicative starting charges for inter-exchange dark fibre services

Service	Indicative maximum charge
Dark fibre connection (per circuit)	£733
Dark fibre rental (per circuit per year)	£51
Dark fibre main link (per metre per year)	£0.15
Dark fibre cessation charge (per cessation request)	£192
Dark fibre RWT charge (per fault)	£350
TRCs in support of dark fibre	Same charges as TRCs for active services (controlled at CPI-CPI)

Summary of existing regulation

- 1.9 Our previous review of the business connectivity markets concluded in 2016 (2016 BCMR Statement).² We decided to impose the following charge controls on BT (without defining separate markets for access and inter-exchange connectivity):
- a cost-based charge control on active services at 1 Gbit/s and below, and on accommodation, ECCs and TRCs provided in connection with those services, in the UK excluding the Central London Area (CLA) and Hull Area;
 - a safeguard cap on active VHB services and charge controls on accommodation, ECCs and TRCs provided in connection with those services, in the UK excluding the CLA, London Periphery (LP) and the Hull Area; and
 - a basis of charges obligation on dark fibre and charge controls on accommodation, ECCs and TRCs provided in connection with dark fibre, in the UK excluding the CLA and Hull Area.
- 1.10 We also imposed a charge control on Traditional Interface (TI) services at 8 Mbit/s and below.

Regulation currently in place

- 1.11 As set out in Section 2 of Volume 1 following the judgment of the Competition Appeal Tribunal, we revoked the BCMR 2016 legal conditions in so far as they applied to the CISBO market (the regulation of TI services remained in place) and imposed temporary regulation in business connectivity markets (Temporary Conditions). These conditions expire on 31 March 2019.
- 1.12 The Temporary Conditions impose cost-based charge controls on active services at 1 Gbit/s and below, and relevant ancillary services (accommodation, ECCs and TRCs). The controls apply to services in a single product market in the UK excluding the CLA, Hull Area and Central Business Districts (CBDs) of Birmingham, Glasgow and Leeds.
- 1.13 They do not impose a charge control on active VHB services or require BT to provide dark fibre services.

Structure of this volume

- 1.14 The remainder of this volume is structured as follows.
- Section 2 sets our objectives and approach in setting charge controls.
 - Section 3 sets out details of our proposed charge control design for active services. We also set out particulars of the basket design for active services and determine how these baskets will work in practice.

² Ofcom, 2016. *Business Connectivity Market Review*. <https://www.ofcom.org.uk/consultations-and-statements/category-1/business-connectivity-market-review-2016>.

- Section 4 sets out the details of our proposed charge control on dark fibre in the market for CI Inter-exchange connectivity.
 - Section 5 sets out how our proposals will be implemented in our legal instruments and how they meet the relevant legal tests.
- 1.15 In addition to these sections, there are five annexes setting out the detail of our proposals on various aspects of the charge controls.
- Annex 18 sets out the cost modelling which has informed our preferred approach for setting the charge control on active services at 1 Gbit/s and below.
 - Annex 19 sets out details of our proposals on base year adjustments.
 - Annex 20 sets out details of our proposals for the pricing of inter-exchange dark fibre.
 - Annex 21 sets out the details of our proposals on cost of capital.
- 1.16 Unless stated otherwise, throughout this volume and the related annexes above, all references to sections relate to sections and the related annexes within Volume 2.³
- 1.17 There are also two annexes which are relevant to both Volumes 1 and 2.
- Annex 22 sets out our glossary.
 - Annex 23 sets out our draft legal instruments.
- 1.18 Alongside this consultation we have also published two reports on the cost of capital by Europe Economics and NERA.

³ Unless stated otherwise, all references to information we have gathered using our formal powers (s.135 notices) is to information collected under the leased lines charge control project.

2. Objectives and approach in setting the leased lines charge control

- 2.1 This section discusses our objectives in setting charge controls. It then sets out our proposed form and duration of charge controls in light of these objectives.
- 2.2 In summary, we propose:
- a CPI-CPI price cap on active services at 1 Gbit/s and below in the CI Access services market in BT Only and BT+1 areas, and in the CI Inter-exchange connectivity market at BT exchanges where we propose that BT has SMP (BT Only and BT+1 exchanges);
 - a CPI-CPI price cap on VHB active services in the CI Access services market in BT Only and BT+1 areas, and in the CI Inter-exchange connectivity market at BT exchanges where we propose that BT has SMP;
 - cost-based starting prices for inter-exchange dark fibre, which are then fixed in nominal terms for the duration of this review period; and
 - CPI-CPI price caps for accommodation services, Excess Construction Charges (ECCs), and Time Related Charges (TRCs).

Overall objective in setting charge controls

- 2.3 Our overall objective when setting charge controls, as prescribed by the Act, is to set such conditions as appear appropriate to us for the purposes of promoting efficiency, promoting sustainable competition, and conferring the greatest possible benefit on the end-users of public electronic communication services.⁴
- 2.4 In Section 10 of Volume 1 we set out how our approach to price regulating wholesale leased line services addresses our competition concerns in the markets we propose BT has SMP and is consistent with our overall strategy. We explain that, in developing our package of remedies (including pricing remedies), a key objective is to ensure certainty and regulatory stability for consumers and telecoms providers in the relatively short period up to April 2021.
- 2.5 In our Strategic Policy Position, we set out how we plan to reform the way in which we carry out competition assessments in telecoms markets to further support network investment in the long term.⁵ In 2021 we will, for the first time, align our reviews of business and residential markets. We also said we would look to vary our regulation by geography depending on the level of competitive intensity.
- 2.6 At this stage, the path that future prices might take under our revised approach is not clear. With greater geographic differentiation in our regulation, and given the short timescale of this review, we are placing the greatest weight on price stability and

⁴ Section 88 Communications Act 2003.

⁵ Ofcom, 2018. *Regulatory certainty to support investment in full-fibre broadband – Ofcom’s approach to future regulation.* https://www.ofcom.org.uk/_data/assets/pdf_file/0025/116539/investment-full-fibre-broadband.pdf.

regulatory certainty over other factors we take into account when setting charge controls. In this period of transition to a new regulatory regime, a key objective is to promote certainty for investors in full-fibre networks and the benefits that full-fibre investment brings through competition at more levels of the value chain.

- 2.7 While our focus is on maintaining price stability, we also have regard to balancing the potential benefits to customers from having prices more tightly aligned to costs, with ensuring BT has a fair opportunity to recover efficiently incurred costs.

Form of the controls

A cap at current prices for active services at 1 Gbit/s and below

- 2.8 In Section 10 of Volume 1 we propose a cap at current prices on active services at 1 Gbit/s and below.
- 2.9 In the context of this review, we consider maintaining stable prices would be more effective than setting a cost-based charge control (such as the current leased lines CPI-X charge control) at managing the risk of regulatory failure. This is particularly the case in relation to incentives to invest in full-fibre networks.
- 2.10 In principle, there are several ways we could implement price stability in the charge control. In particular, we could propose to cap charges in real terms (i.e. a CPI-0% control) or in nominal terms (i.e. a CPI-CPI control).
- 2.11 To inform our proposals, we have undertaken some modelling to understand the likely evolution of costs and the implications of the options on BT's cost recovery. This analysis (explained in more detail in Annex 18) is largely based on the same methodology and models as the 2016 LLCC.⁶
- 2.12 Our analysis shows that prices for active services⁷ at 1 Gbit/s and below can be expected to be broadly aligned to cost by the end of the current charge control period (i.e. April 2019). Based on the likely evolution of efficient costs up to April 2021, our modelling suggests that capping prices in nominal terms could be expected to lead to BT recovering around £50 to £65m more than if we were to set the control on a fully allocated cost (FAC) basis.
- 2.13 If we consider a wider range for key input parameters (as we normally would if we were consulting on a range for the X for a cost-based CPI-X control)⁸, this could lead to greater over-recovery for BT in the low-cost scenario (up to £135m) and some under-recovery in the high-cost scenario (around £10m). The details of our low and high-cost scenarios are provided in Annex 18. However, we do not consider the risks of under-recovery of costs to be significant, and CPI-CPI falls within the range of outcomes in our modelling.

⁶ 2016 BCMR Statement, Volume 2.

⁷ Services currently included in the Ethernet basket.

⁸ When calculating the allowed percentage change in prices (the controlling percentage) as part of a charge control, the X value is the part of the controlling percentage which is not CPI so that the controlling percentage = CPI-X.

- 2.14 Our modelling implies that were we to set a cost-based charge control, it is most likely that prices would need to fall in nominal terms (however, as noted above, there is greater uncertainty about the future path prices beyond this review period given that we will be reviewing our approach to downstream remedies). Therefore, we consider that capping prices in nominal terms, rather than in real terms, is a more appropriate way to balance our desire for price stability and protecting consumers from high prices. We do not consider that any potential over-recovery of costs by BT will outweigh the benefits of pricing stability or that the risks of under-recovery of costs are significant.
- 2.15 As a result, we propose to apply a CPI-CPI price cap to active services at 1 Gbit/s and below in the CI Access services market in BT Only and BT+1 areas, and in the CI Inter-exchange connectivity market at BT Only and BT+1 exchanges.

Safeguard cap for VHB services

- 2.16 In Section 10 of Volume 1 we propose a safeguard cap at current prices on active services above 1 Gbit/s in the CI Access services market in BT Only and BT+1 areas, and in the CI Inter-exchange connectivity market at BT Only and BT+1 exchanges.
- 2.17 Active VHB services are not currently subject to charge controls. As explained in Section 10 of Volume 1, our primary concern when it comes to the pricing of VHB services is that BT would increase prices in areas with limited or no competition to subsidise price reductions in more competitive areas (or where it considers rivals may build).
- 2.18 VHB prices are currently significantly above cost, but we expect prices will reduce in time under our proposals for inter-exchange dark fibre from BT Only exchanges and unrestricted DPA. Therefore, we consider that capping current prices in nominal terms (i.e. a safeguard cap at CPI-CPI) is appropriate. For current prices, we propose to use charges as at 1 October 2018.

Inter-exchange dark fibre pricing

- 2.19 We propose to require BT to provide access to dark fibre at cost for inter-exchange connectivity circuits from BT Only exchanges.
- 2.20 As explained in Section 12 of Volume 1, while in principle we could adopt either a cost-based or active-minus approach when setting a charge control, we propose to set a cost-based charge control for the proposed inter-exchange dark fibre remedy as we consider that its price should reflect its underlying costs. We consider that the reasoning used in the 2016 BCMR to support an active-minus pricing approach is no longer relevant for this review.⁹
- 2.21 Since BT does not currently offer a dark fibre service, we need to work out starting charges for any such service. We propose to base these starting charges on current cost accounting for fully allocated costs (CCA FAC) derived from BT's regulatory financial statements. For

⁹ 2016 BCMR Statement, paragraphs 9.99-102.

this consultation we have based our cost estimates on 2016/17 data and propose to update our estimates using 2017/18 cost data for our statement. Section 4 explains in more detail our rationale for the chosen cost standard and how we have estimated base year costs for dark fibre, including any additional costs BT may incur in providing the new service. Section 4 also sets out our approach to any additional ancillary services BT will need to provide to support its dark fibre products.

- 2.22 In considering how prices should evolve over the charge control period, we have given weight to both the benefits of pricing stability and ensuring that the prices customers pay are aligned with costs. In previous leased lines charge controls, we have set prices by forecasting the likely evolution of efficient costs over the charge control period and aligning prices to cost by the end of the period. We are introducing dark fibre as a new product and so we are proposing to set prices using the latest available information on efficient costs.
- 2.23 Many of the costs of providing dark fibre are also incurred in providing active services. On the one hand, this suggests that unit costs of providing dark fibre might be expected to fall (in nominal terms) over the charge control period (consistent with our modelling of active services). On the other hand, there is uncertainty around how certain key drivers of dark fibre costs will evolve over time. In particular, there is considerable uncertainty over how service volumes will grow and the extent to which BT can achieve similar efficiency gains on passive network elements as on active network elements.
- 2.24 Given that this a short review period and prices will reflect the latest available cost information, we do not believe that there would be a significant misalignment of cost and revenue of dark fibre services over the charge control period if we kept prices flat in nominal terms. We also consider that, given volumes of dark fibre are likely to be relatively low over the period, that it would be disproportionate to carry out a detailed forecasting exercise of dark fibre costs and we therefore believe it is appropriate to base prices on 2017/18 cost data.
- 2.25 Keeping prices flat in nominal terms ensures consistency with our proposed charge control on active services. It also supports stability over the relatively short charge control in preparation for our more fundamental review of access services in 2021. We therefore propose to impose a CPI-CPI cap on dark fibre services for the second year of the charge control period.
- 2.26 As explained further in Section 4, we propose to set a maximum charge on each individual dark fibre service which would apply for the duration of this charge control.

Accommodation, ECCs, and TRCs

- 2.27 To use BT's regulated wholesale leased line services (including dark fibre), telecoms providers require certain ancillary services such as accommodation, construction work or services outside Openreach's terms of service (ECCs), as well as services such as fault repairs (TRCs). In Sections 12 to 14 of Volume 1 we propose that certain ancillary services should continue to be subject to a charge control.

- 2.28 Applying our general principle of price stability in this review, we propose CPI-CPI controls on these services, in line with controls for active services. Details of our basket design and specific proposals for ancillary services are covered in Section 3.

Duration of our charge controls

- 2.29 Consistent with the duration of this review period, we are proposing to set charge controls that expire on 31 March 2021. While we typically set charge controls for three years, we note that both two- and three-year charge controls are consistent with the market review cycle in the Framework Directive.¹⁰
- 2.30 In the July 2018 Strategic Policy Position, we signalled our intention for the review period to end by March 2021 to allow us to align the next reviews of downstream remedies for residential and business markets. With the boundaries between business and residential networks increasingly blurred, this approach will allow for a more holistic review of the appropriate remedies, including pricing remedies, across the different markets. We expect this new set of downstream remedies to be in place from April 2021.
- 2.31 Section 88 of the Act also requires us take a view on what appears to us to be appropriate for the purposes of (among other things) promoting efficiency. Given our focus on maintaining price stability ahead of a wider review of our regulation, we consider that a shorter than usual period is appropriate. This reduces the risk of costs deviating significantly from prices, while still supporting predictability to BT and other telecom providers as to the regulatory environment that they face.

Consultation question

Question 2.1: Do you agree with the proposed form of charge controls? Please provide evidence to support your views.

¹⁰ Article 16 of the Framework Directive 2002/21/EC, as amended by Directive 2009/140/EC.

3. Charge control design

- 3.1 This section outlines our approach to our proposed basket design and charge control structure for:
- active services at 1 Gbit/s and below;
 - active VHB services; and
 - accommodation services, ECCs and TRCs.
- 3.2 In Section 2 we propose CPI-CPI charge controls on active services at all bandwidths in BT Only and BT+1 areas in the CI Access market and from BT Only and BT+1 exchanges in the CI Inter-exchange market, hereafter referred to as the ‘charge control areas’.¹¹ In the following subsections, our proposed controls and basket structure apply to the relevant markets as outlined here, unless specified otherwise. In Section 12 of Volume 1 we propose a cost-based dark fibre service from BT Only exchanges in the CI Inter-exchange market. The basis for dark fibre charge controls is explained in Section 4.
- 3.3 Consistent with our previous practice for leased lines, we continue to consider that there are benefits associated with broad baskets, such as giving BT the flexibility to set efficient charging structures, respond to changes in demand and costs and encourage efficient migration. However, a broad basket control alone may not offer sufficient protection for individual services, for example, the flexibility might be used to set charges in a way that harms competition. Therefore, where necessary, we propose sub-caps to address any competition concerns and to mitigate these risks. We note that in some cases it might not be practicable to construct baskets, for example, if we do not have appropriate weights.¹²
- 3.4 In developing our basket design, we have also given due weight to our regulatory objectives of providing price stability and regulatory certainty during this period of transition to a new regulatory regime.

Summary of proposals

1 Gbit/s and below services basket

- 3.5 We propose to adopt a basket covering Ethernet services at 1 Gbit/s and below in the charge control areas, hereafter referred to as the ‘1 Gbit/s and below services basket’.¹³ We propose to implement sub-baskets and sub-caps for Cablelink and for all charges within the basket since we do not consider the basket-level control alone offers sufficient protection to address our competition concerns. Table 3.1 below summarises the structure of this basket.

¹¹ See Table 1.1 for a summary of pricing remedies for the CI Access and CI Inter-exchange markets.

¹² For example, we do not propose a basket for dark fibre services, as explained in Section 4.

¹³ Please note, in the draft legal instrument we refer to this basket as the ‘Ethernet (1 Gbit/s and below) Services Basket’.

Table 3.1: Proposed baskets for active services at 1 Gbit/s and below

Baskets	Services within scope	Level of control
1 Gbit/s and below services basket	Connection, rental and Main Link charges for Wholesale fibre-based Ethernet services at 1 Gbit/s and below Interconnection services and Cablelink Ethernet ancillary charges (excluding accommodation, Excess Construction Charges and Time Related Charges) to support Ethernet services at 1 Gbit/s and below	CPI-CPI
Cablelink sub-basket	Cablelink services ¹⁴	CPI-CPI
Sub-cap on all charges	Each individual service within this basket	CPI+5%

VHB services basket

3.6 We propose to adopt a basket covering Ethernet and WDM services at VHB in the charge control areas, hereafter referred to as the ‘VHB services basket’.¹⁵ We propose to implement sub-baskets and sub-caps for all charges within the basket, since we do not consider the basket-level control alone offers sufficient protection to address our competition concerns. Table 3.2 below summarises the structure of this basket.

Table 3.2: Proposed baskets for active VHB services

Baskets	Services within scope	Level of control
VHB services basket	Connection, rental and Main Link charges for Wholesale fibre-based Ethernet and WDM services at VHB Ethernet ancillary charges (excluding accommodation, Excess Construction Charges and Time Related Charges) to support Ethernet and WDM services at VHB	CPI-CPI
Sub-cap on all charges	Each individual service within this basket	CPI+5%

¹⁴ We note that the same Cablelink charges will apply to dark fibre inter-exchange services and active services.

¹⁵ Please note, in the draft legal instrument we refer to this basket as the ‘Ethernet and WDM (over 1 Gbit/s) Services Basket’.

Separate baskets for accommodation services, ECCs and TRCs

3.7 We propose to implement separate baskets for accommodation services, ECCs and TRCs.¹⁶ We propose to implement sub-baskets and sub-caps for each individual charge within baskets where we do not consider the basket-level control alone offers sufficient protection to address our competition concerns. Table 3.3 below summarises the structure of the baskets for these services and charges, together with our sub-basket and sub-cap constraints.

Table 3.3: Proposed baskets for accommodation services, ECCs and TRCs

Ancillary service	Baskets	Services within scope	Level of control
Accommodation services, i.e. to rent space in BT Exchanges	Accommodation services	Access Locate Administration Fee	CPI-CPI
Excess Construction Charges	Direct ECCs	Blown fibre, cable (fibre or copper) including any jointing required, blown fibre tubing in duct, internal cabling, overblow services, fibre cable and survey fee/planning charges	CPI-CPI
	Sub-cap on all charges	Each individual Direct ECC	CPI+5%
	Contractor ECCs	Construction activities that Openreach provides through an external contractor	Basis of charges obligation
Ethernet Time Related Charges	Ethernet TRCs	Each individual relevant Ethernet TRC	CPI-CPI

Principles for basket design

3.8 In this section, we set out the principles that have guided us in designing the charge control baskets.

3.9 A charge control basket is a group of services that are subject to a common charge control restriction. Combining services in a single basket means that the price cap (e.g. CPI-X) would apply to the changes in the charges across all the services in the basket, weighted by revenue.¹⁷

¹⁶ We discuss how these controls apply to different services in more detail below.

¹⁷ As explained below, we have chosen to use prior year revenue weights for this control.

- 3.10 In designing the charge control baskets, we have been guided by the following principles:¹⁸
- Where the services being considered share substantial common costs, a single basket is more conducive to efficient pricing and cost recovery.
 - Where the services being considered face different competitive conditions or where BT does not use the same wholesale inputs as its rivals, placing them in the same charge control basket may give BT an incentive to set charges in a way that adversely affects competition. In this case, we might consider introducing sub-caps or placing the services in separate baskets.
 - Where it is appropriate for BT to encourage migration from a legacy service to a more efficient service, placing the services in the same basket would allow BT desirable pricing flexibility.
 - Our design of baskets should account for other rules and ensure that it does not require BT to breach these other rules.

Advantages of broad baskets

- 3.11 A broad basket gives BT the most pricing flexibility to determine the structure of prices to meet the charge control. Where relative prices can be set to reflect how demand responds to price changes, this pricing flexibility is more likely to result in charges that recover costs, particularly common costs, in an efficient way.¹⁹
- 3.12 A broad basket also allows BT to respond to changes in demand and costs by changing relative prices and re-optimising charges for new patterns of demand. Subject to sufficient constraint on its pricing at the basket level, BT is better placed to assess demand and set the prices for services at a more granular level.
- 3.13 Moreover, a broad basket allows BT to set charges in a way which sends efficient migration signals since it provides BT with the flexibility to set the relative prices of different types or bandwidths of service. Subject to sufficient constraint on its pricing at the basket level, we consider BT should be afforded the freedom to encourage efficient migration between different services.
- 3.14 Broad baskets also reduce the risk of regulatory failure such as the regulator becoming more involved in micro-managing detailed pricing decisions, where there may not be a clear basis for doing so, or when the information available to the regulator may not be reliable or may be particularly susceptible to change over time.

¹⁸ We have used these principles in previous decisions, for example, in Volume 2 of the 2016 BCMR Statement.

¹⁹ In this case, efficient means a set of prices with mark-ups over marginal (or incremental) costs which least distort consumption relative to the consumption which would prevail with prices at marginal (or incremental) cost. This is known as Ramsey pricing.

Disadvantages of broad baskets

- 3.15 The main disadvantage of broad baskets is that, in some circumstances, the flexibility to set relative charges can be exploited to harm competition. Two sets of circumstances are particularly relevant:
- BT may have an incentive to price in a manner that favours its downstream operations. Where BT uses different wholesale services to its competitors to provide the same downstream service, BT may have an incentive to reduce the price of the service it uses most and increase the price of the service used by its competitors. Placing both wholesale services in a single charge control basket without further restrictions could give BT the ability to behave in a way that harms competition.
 - There may be differences in the intensity of competition that BT faces in the provision of different services. If competitive conditions differ between services within a single basket, BT may have an incentive to concentrate price cuts on the most competitive services and offset these with increases where competition is weaker.

Addressing the disadvantages

- 3.16 In some cases, it is possible for the competition concerns identified above to be addressed by using more narrowly defined baskets. Each basket could be defined to include only services where there is broadly the same degree of competition and there could be separate baskets for services that are used predominantly by BT and for those which are mainly used by its competitors.
- 3.17 Alternatively, or in addition, sub-caps on individual services within a basket can be used to address these competition concerns. In this way, the potential harm to competition can be mitigated while retaining the pricing flexibility benefits of basket controls.
- 3.18 Whether a broad basket with sub-caps is preferable to a larger number of smaller baskets will depend on the characteristics of the service being charge controlled. In principle, the benefits of broad baskets are likely to be larger the greater the extent of common costs and the greater the similarity of competitive conditions between services in the basket. However, if we need to impose multiple sub-baskets and set the sub-caps tightly, there is a risk that the benefits of broad baskets relative to narrow baskets are undermined. We consider that in this control, we can impose sub-caps in a way that effectively addresses our competition concerns while preserving the benefits of broad baskets.

Weighting prices changes

- 3.19 A basket control limits the maximum weighted average increase in prices in any given year. The weighting we use is the amount of revenue earned by each service during a period (e.g. a financial year). When BT sets prices during the charge control year, we need to consider how the revenue weights for the services should be determined, e.g. whether they should be based on the previous year's revenues or a forecast of the current year revenue weighting.

Current year revenue weights

- 3.20 Current year weighting means that weights are set equal to the proportion of current year basket revenues accounted for by each service.
- 3.21 If BT sets charges based on forecasts of the current year volumes, it should be able to recover any over- or under-charging which results from divergence between forecast and actual volumes in subsequent periods. However, as a result, it could have an incentive to overcharge in the short term and repay the ‘overcharge’ in subsequent periods (and there may be a cash flow incentive to do so unless interest is due on any ‘overcharge’).
- 3.22 It is also possible that some telecoms providers could seek to game the control and try to influence BT’s pricing decisions by giving misleading forecasts. If telecoms providers were able to influence BT in this way, it could increase volatility in prices. In principle, an appropriately set interest rate would reduce or remove any incentive for BT to ‘overcharge’ or for telecoms providers to try to influence BT’s pricing to ‘undercharge’. Such a mechanism would also add further complexity to the charge control.
- 3.23 An alternative way to mitigate the above risk would be to review BT’s volumes forecasts. However, this would impose a significant administrative burden on us and telecoms providers, as the necessary information would need to be gathered on an ongoing basis to enable review of the forecasts. Moreover, forecasting inherently involves uncertainty and hence some degree of judgement. While including an additional review stage may reduce the risk of BT or other telecoms providers gaming the controls, this process would not fully remove these risks or guarantee the accuracy and validity of these forecasts.
- 3.24 Using forecast current year volume weightings could lead to volatile movements in prices, as charges are set and then later adjusted for over- and under-recovery against the controlling percentage for the cap. This is because demand for ancillary services may be volatile and forecast volumes are likely to vary from actual volumes. Unforeseen changes in demand are likely to have a significant impact on variation between outturn and forecast volumes, and hence, are likely to have a significant impact on whether the price changes meet the basket control.
- 3.25 The volatility in wholesale charges caused by using forecasts of current year volume weightings could ultimately be harmful to customers. It would create uncertainty for telecoms providers using inputs from BT and limit their ability to plan.
- 3.26 In addition, we consider that the clause on BT to automatically make repayments to its wholesale customers of any amounts overcharged by reference to the charge controls may not fit well with current year weights.²⁰ The clause does not operate if BT charges less than the controls. Thus, BT would be subject to uncertainty when forecasting the current year volumes and subject to a risk of being unable to recover the allowed revenues (and hence potentially costs) of a basket in that period or subsequent ones.

²⁰ We discuss this clause in Section 5.

Prior year revenue weights

- 3.27 Prior year weighting means the basket weights are set equal to the proportions of basket revenues accruing to the relevant services in the year prior to the one in which the price change occurs.
- 3.28 Prior year weights enable BT to plan its charges in a given year with the confidence that it will meet the overall basket control.²¹ The main disadvantage of such an approach is that it is vulnerable to a form of gaming involving targeting price increases on services whose weights in the basket are growing over time, so that the prior year revenue weight understates the effect of the price increase on actual revenues. Partly to mitigate this disadvantage, we propose to use a sub-cap on each individual charge in a basket where appropriate.
- 3.29 We consider the clause on BT to automatically make repayments to its wholesale customers of any amounts overcharged by reference to the charge controls fits well with prior year weights. This is because at the start of each control period BT will know (at least to a significant extent) the prior year volumes/revenues and thus, will not be subject to a risk of being unable to recover the allowed revenues (and hence potentially costs) of a basket in that period or subsequent ones.
- 3.30 We therefore propose to use prior year weights for the basket controls.

Our proposals for Ethernet and WDM services

- 3.31 In approaching the charge control structure and basket design, we have taken into account the objectives specific to this market review. For active services at 1 Gbit/s and below, we place significant weight on maintaining price stability and propose to cap current prices in nominal terms (rather than setting controls with prices tightly aligned to cost).²² We have also taken into account our general principles for basket design, outlined above.

Active Ethernet and WDM services

- 3.32 We consider there are two reasonable options for designing baskets for Ethernet and WDM services. We could include them all in a single broad basket, covering services at all bandwidths; or we could place them into two separate baskets, one for active services at 1 Gbit/s and below and one for active VHB services, reflecting the different rationale for charge controlling services in these two different bandwidth categories (as explained in more detail below).
- 3.33 In this subsection we outline our proposal to impose separate baskets for:
- Ethernet services at 1 Gbit/s and below; and

²¹ As outlined in Section 5, BT must notify telecoms providers 90 days in advance for price increases and 28 days in advance for price decreases to existing business connectivity services. Therefore, when setting prices at the start of the new control year, BT relies on revenue data from the first nine months of the year and forecasts for the final three months.

²² For more details, see Section 10 of Volume 1 and Section 2 of this volume.

- Ethernet and WDM services at VHB.

Arguments in favour of a single broad basket

- 3.34 Ethernet and WDM services of different types and across different bandwidths are likely to share substantial common costs. Generally, our preference is to provide BT with the incentive to recover common costs in the most efficient way by placing these services in a single charge control basket. In this respect, including Ethernet and WDM services at all bandwidths in a single broad basket would provide BT with the flexibility to recover common costs efficiently. As such, the charging structure that would arise under a single broad basket could be more efficient than under a narrower basket design (i.e. with services of different bandwidths placed into separate baskets). This consideration would support a single broad basket for Ethernet and WDM services across all bandwidths.
- 3.35 We consider it is appropriate for BT to have the flexibility to adjust the relative price of legacy and new Ethernet service charges to promote efficient migration. In theory, placing all services within a single basket would provide more flexibility for BT to set prices that encourage efficient migration.

Arguments in favour of separate baskets

- 3.36 As explained in Section 10 of Volume 1, our proposed active remedies have been developed with the strategic context of this review in mind. With respect to our approach to the pricing of active services, we propose to charge control services at 1 Gbit/s and below and VHB services for different reasons²³:
- we propose that prices for active services at 1 Gbit/s and below are capped at current levels, primarily to provide price stability and regulatory certainty; and
 - we propose a safeguard cap at current prices for active VHB services, to prevent BT from raising prices where it faces little competition to reduce prices where competition may emerge.
- 3.37 Under the current controls, active services at 1 Gbit/s and below have been charge controlled and prices will be reasonably close to costs by the end of the current control period.²⁴ However, BT currently earns high margins on active VHB services (higher than it earns for services at lower bandwidths). If we were to impose a broad basket for active Ethernet and WDM services across all bandwidths, BT would have significant flexibility over the prices of these services. In contrast, a separate basket for active VHB services would limit this flexibility and thus limit BT's ability to subsidise price reductions in more competitive areas.
- 3.38 While we recognise a separate basket for active VHB services does not remove BT's ability to set prices in this way, it helps to mitigate this risk by reducing BT's ability to subsidise price cuts. In addition, we note that continuing with a separate basket for active services at

²³ See Section 10 of Volume 1 for more detail.

²⁴ At the start of this control period we expect the prices of the basket of active services at 1 Gbit/s and below to be close to the FAC. See Annex 18 for more detail.

1 Gbit/s and below is more likely to be conducive to price stability than including them in the same basket as VHB services.

- 3.39 Therefore, we consider that affording BT the flexibility to rebalance prices across all bandwidths risks undermining our key regulatory objectives.

Our proposal

- 3.40 We recognise that providing BT with greater flexibility to rebalance prices across bandwidths is likely result in more efficient charging structures. While this is desirable, we believe it is outweighed by our regulatory objectives which are at risk of being undermined if we provide BT with too much pricing flexibility. Moreover, we place less weight on the flexibility to encourage efficient migration in this control period, since legacy technologies are a small minority of BT's leased line base. Having separate baskets also reflects the fact that our rationale for imposing charge controls for active services at 1 Gbit/s and below is different to the rationale for active VHB services. Furthermore, separate baskets are more consistent with the current charge control; active services at 1 Gbit/s and below are currently subject to a charge control in a single basket, whereas active VHB services are not currently charge controlled.

- 3.41 In light of these considerations, we propose separate baskets for Ethernet services at 1 Gbit/s and below and for Ethernet and WDM services at VHB in the charge control areas. As explained in Section 2, we propose to cap active prices with a CPI-CPI control. Therefore, we propose each basket is controlled at CPI-CPI.

Sub-baskets and sub-caps

- 3.42 We consider it is necessary to impose sub-baskets and sub-caps within both baskets to address our concerns that BT could use its pricing flexibility to adversely distort competition for certain services.

- 3.43 In this section we outline our proposal to impose sub-caps on:

- Cablelink;
- all charges within the 1 Gbit/s and below services basket; and
- all charges within the VHB services basket.

- 3.44 We also explain why we propose not to maintain certain sub-baskets adopted in the 2016 BCMR.

Sub-cap on Cablelink

- 3.45 As explained in Section 14 of Volume 1, Openreach provides a 'tie cable' product in support of accommodation services called Cablelink. We explain that it is an essential element of the accommodation services that Openreach provides; it allows a telecoms provider to connect two remote licensed areas of the BT exchange building (i.e. two separate areas in which the telecoms provider has installed its equipment), as well as connect a telecoms provider's external fibre cable located immediately outside a BT exchange to a telecoms provider's equipment inside the exchange.

- 3.46 As outlined in Section 14 of Volume 1, we propose a price control for Cablelink. Given this is an important input for telecoms providers, we consider that a broad basket-level control would not offer sufficient protection for these services and they should be subject to a tight control to prevent price increases above the current level. We could either place Cablelink in a separate basket or control it through a sub-basket.
- 3.47 Cablelink has shared common costs with Ethernet services, which suggests it may be desirable to include these services within one of the two broad baskets for active services. This would give BT the flexibility to recover common costs in a more efficient way over the period of the control. As such, we do not think Cablelink should be placed in a separate narrow basket.
- 3.48 Cablelink is a single set of services which are not bandwidth-specific. We do not think it is appropriate to control Cablelink through both baskets since this would involve splitting these services by bandwidth in a way that is inconsistent with the nature of the product. Consequently, we consider all Cablelink services should be controlled through a single sub-basket.
- 3.49 We have reviewed the cost attributions for these services and we are concerned that the costs allocated to Cablelink appear high.²⁵ As a result, we want to provide BT with the flexibility to change its cost allocation and recover these costs from other services where this is more appropriate.
- 3.50 The 1 Gbit/s and below services basket contains the majority of service volumes. Including the Cablelink sub-basket in this broad basket would provide BT with greater flexibility to rebalance prices to recover costs more efficiently than including it in the VHB services basket. We also note this is consistent with the current controls, which may be more conducive to price stability. Therefore, we propose to set a sub-basket for Cablelink within the 1 Gbit/s and below services basket in the charge control areas.
- 3.51 As explained in Sections 12 and 14 of Volume 1, we propose that the controls on accommodation services apply to dark fibre inter-exchange services and active services in the same way. Consequently, the same Cablelink charges will apply to dark fibre inter-exchange services and active services.
- 3.52 Given Cablelink is a key input for other telecoms providers, we propose this sub-basket should be controlled at the same level as the broad basket (CPI-CPI). We consider that this strikes an appropriate balance between ensuring that telecoms providers can consume Ethernet services, and the importance of these products for competition and cost recovery.

²⁵ There are costs which are common to Cablelink and Ethernet services. On a per circuit basis, Cablelink and longer high-capacity Ethernet services pick up a similar share of these common costs. As explained in Annex 18, overall costs and revenues are closely aligned.

Sub-cap on all charges within the 1 Gbit/s and below services basket

- 3.53 A broad basket gives BT flexibility to set charges in an efficient way to recover common costs, however we impose sub-caps when we consider that this flexibility should be limited. If BT was subject to the basket-level control only, it would have the opportunity to game the charge control design (see above). Moreover, in this period of transition to a new regulatory regime, we are mindful of the risks that significant changes in the prices of individual services raise. Therefore, we propose a sub-cap on all services within the 1 Gbit/s and below services basket to mitigate the risk of the charge control being gamed and to limit BT's ability to increase the price of any individual service in a given year.
- 3.54 In the 2016 BCMR and under the Temporary Conditions, this sub-cap applies to rentals and connections at 1 Gbit/s and below in combination (rather than individually). This was with the intent to afford BT additional flexibility in recognition that it may need to rebalance prices in response to the proposed dark fibre remedy. We consider that BT does not need this additional flexibility in the present circumstances as we are not proposing a comparable dark fibre remedy in this review, and propose that each rental and connection charge should be individually subject to this sub-cap.
- 3.55 The level of this sub-cap is based on a regulatory judgement as to what level appropriately balances our objectives. We propose this sub-cap should be set at CPI+5%. We consider this offers an appropriate level of flexibility to rebalance charges while preventing significant price increases for individual services.²⁶

Sub-cap on all charges within the VHB services basket

- 3.56 For the reasons outlined above, we propose a sub-basket on all charges within the VHB services basket. We propose the sub-cap should be set at CPI+5%.

No sub-baskets for EAD and EAD LA 1 Gbit/s services or Main Link services

- 3.57 We do not consider it is necessary to implement sub-baskets for EAD and EAD LA 1 Gbit/s services and for Main Link services. We do not have specific concerns over BT introducing targeted price increases for these services and believe that the sub-cap of CPI+5% on each individual charge offers sufficient protection.
- 3.58 More specifically, we note that the risks associated with the prices of these services in the 2016 BCMR are no longer relevant.²⁷ These risks related specifically to the nature of the propose dark fibre remedy, where charges were to be set with reference to the prices of BT's active services. In Section 12 of Volume 1 and Section 4 of this volume, we propose to set charges based on our estimate of the costs of dark fibre inter-exchange services (rather than on an active-minus basis). Therefore, we do not propose sub-baskets for 1 Gbit/s EAD and EAD LA services or for Main Link services.

²⁶ See Section 5 for details on how these controls apply to services which have been withdrawn from supply.

²⁷ 2016 BCMR Statement, Volume 2, paragraphs 5.270-279 and 5.283-287.

No sub-basket for interconnection services

- 3.59 As outlined in Section 14 of Volume 1, to consume wholesale access services, telecoms providers need to be able to interconnect their network with BT's. Interconnection is thus essential for any wholesale remedy to be effective. However, telecoms providers do not need to purchase a specific interconnection product from BT to connect EAD and WES circuits to their network since it is already incorporated within the EAD and WES circuits. Interconnection prices are therefore already constrained by the charge controls on EAD and WES circuits in the baskets defined above.
- 3.60 We are aware of a single exception to this: if other telecoms providers wish to aggregate multiple EBD circuits at a customer site then they need to purchase the separate Bulk Transport Link (BTL) product which is not incorporated into existing products and therefore is not already charge controlled. We note that the use of BTL has significantly declined such that this product is no longer used in any material volumes.
- 3.61 Consequently, we do not propose to adopt a separate sub-basket for interconnection services and consider that the sub-cap of CPI+5% on each individual charge offers sufficient protection.

Our proposals for accommodation, ECCs and TRCs

- 3.62 To use the regulated wholesale services that Openreach provides in the leased lines markets, telecoms providers require certain ancillary services such as accommodation products, construction work or services outside Openreach's standard charges. Accommodation services, such as space and power in BT's local exchange, are necessary ancillary services. Similarly, ECCs are necessary to allow access network extensions that are specific to an individual customer. TRCs are paid-for services, such as out-of-tariff fault repairs and providing or rearranging services, where the work is not covered within Openreach's standard charges. In Sections 13 and 14 of Volume 1 we propose to apply a charge control for these services.
- 3.63 In this section, we set out our specific basket proposals for accommodation services, ECCs and TRCs.²⁸

Accommodation services

- 3.64 Openreach currently provides two types of accommodation services: Co-Mingling and Access Locate. Co-Mingling is exclusively provided in support of Local Loop Unbundling (LLU) while Access Locate enables telecoms providers to put site-specific communications equipment in BT's exchanges.

²⁸ For the avoidance of doubt, where we discuss these terms, we refer to ECCs and TRCs specific to leased line services.

3.65 Access Locate and LLU Co-Mingling services are currently charged at the same prices.²⁹ This is because we regulate several overlapping Ethernet accommodation products in the same way as LLU Co-Mingling products and the charge control set by the 2018 WLA Statement applies to both. The controls applied to these services by the 2018 WLA Statement will continue to apply for this control period irrespective of whether the accommodation products are used by telecoms providers for leased line products or for LLU.

Our proposals

3.66 In Section 14 of Volume 1 we propose to apply charge controls to accommodation services in the charge control areas. As we explain in Section 12 of Volume 1, any accommodation services required to support the dark fibre inter-exchange services will be subject to the same controls, as outlined below.

Accommodation products that overlap with LLU Co-Mingling products

3.67 We propose to adopt an approach consistent with the 2016 BCMR, which sought to avoid the undesirable situation where overlapping products would be subject to two different charge controls. As such, we propose not to place any additional price control on these overlapping products. Instead, we propose to require prices for accommodation products used for leased lines to be set in the same way as for LLU Co-Mingling.

Access Locate Administration Fee

3.68 The Access Locate Administration Fee is payable by LLU operators who want to convert their Revised agreement for Access Network Facilities (RANF) to Access Locate and is not regulated by the 2018 WLA Statement's charge controls.

3.69 The current Access Locate Administration Fee is priced at £214.70, which is approximately the same charge as at the time of the 2016 BCMR Statement. Given this price has remained relatively flat since 2010, we consider a CPI-CPI cap is appropriate given our objectives.³⁰

Approach to controlling Excess Construction Charges

3.70 Openreach levies ECCs when construction work is required to deliver a new leased line connection. It covers activities such as site survey, installation of new duct, blown fibre, drilling through walls and provision of a footway box.

²⁹ Access Locate Accommodation and Access Locate Power are priced at the same level as LLU Accommodation and power. See Openreach, Price List, Access Locate and Access Locate Plus.

<https://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=q%2B2vpfgQQ99SiimXeC7QjskLe4HVN3IVHU%2BmY7RLKoBZ6rNZujnCs99NbIKJZPD9hXYmijxH6wrCQm97GZMyQ%3D%3D> [accessed 18 October 2018].

³⁰ There has been very little variation (£0.30) in the Access Locate Administration Fee since 2010. For more detail, see the Openreach Price list, reported above.

3.71 In Section 13 of Volume 1 we propose to apply charge controls to ECCs in the charge control areas. As we explain in Section 12 of Volume 1, ECCs should not be charged for as part of the provision of dark fibre services.

Background

3.72 In 2014 we issued a direction that allowed Openreach to exempt new provisions of EAD services from the first £2,800 of ECCs (the threshold charge) and to make up the resulting loss of its revenue with a balancing charge of £548 (the balancing charge), which would be part of the standard connection charge for all other EAD new provisioning services.³¹ The rationale for this was that the change would significantly reduce the lead times for provisioning of most of the EAD orders which incur ECCs. We also carried out an analysis that showed the change was ‘revenue-neutral’.

3.73 In the 2016 BCMR we considered that Direct ECCs were out of line with the underlying costs of provision.³² As a result, we imposed glide path controls on Direct ECCs to align the charges with the underlying costs.

3.74 Furthermore, we outlined that information from BT regarding its contractual arrangements for Contractor ECCs showed that contractor costs for the provision of ECCs are subject to review and potential changes over the period of the control.³³ We explained that this made forecasting difficult and that there would be a significant risk of over- or under-recovery by BT if we were to set the prices for Contractor ECCs for the control period. Therefore, we imposed a basis of charges obligation for Contractor ECCs.

3.75 Finally, in the 2016 BCMR we kept the ECC threshold charge fixed at £2,800, but allowed BT the flexibility to adjust its balancing charge to ensure cost recovery and revenue neutrality.³⁴

Direct Excess Construction Charges

3.76 Consistent with the 2016 BCMR, we propose a separate basket for Direct ECCs. We consider that it is not appropriate to include ECCs in the main Ethernet baskets:

- ECCs share very few common costs with Ethernet services as they are mostly construction costs; and
- ECCs represent a low value compared to the Ethernet baskets, meaning that putting them in a combined basket would not effectively control their prices without an additional sub-cap.

³¹ Ofcom, 2014. *Excess Construction Charges for Openreach Ethernet Access Direct*.

https://www.ofcom.org.uk/data/assets/pdf_file/0023/82715/excess-construction-charges-statement.pdf.

³² Direct ECCs refer to activities that are carried out by Openreach (i.e. using internal direct labour and materials).

³³ Contractor ECCs refer to activities that are carried out by a contractor that is external to Openreach.

³⁴ To ensure BT used this flexibility appropriately, we required it to demonstrate that the balancing charge was set to ensure revenue neutrality.

- 3.77 We therefore propose to adopt a separate basket for Direct ECCs. This basket covers ECCs for cable (fibre or copper) including any jointing required, blown fibre, blown fibre tubing in duct, internal cabling (including internal blown fibre tubing), overflow services, fibre cable and survey fee/planning charges.
- 3.78 In line with our approach to the other basket caps, we have placed weight on price stability and regulatory certainty. However, BT's latest RFS suggests that in 2017/18 it under-recovered its ECC costs (though this was the first RFS in which it had calculated costs of ECCs).³⁵ In previous years, BT had assumed that the price of an ECC job was equal to the costs of the job.³⁶ In 2017/18, matched costs (i.e. spend on ECCs) were very similar to ECC revenues. The shortfall in 2017/18 was therefore roughly equal to the attribution of indirect costs.
- 3.79 We could control ECC charges by allowing BT to recover these overhead costs through ECCs. Under the revised 2017/18 RFS data, this would lead to potentially large increases in prices for ECCs. However, this would be based on one year's cost data, under a new cost estimation process, which may not be stable.³⁷
- 3.80 Therefore, we instead propose that this basket be subject to a CPI-CPI control. In proposing this, we are implicitly allowing recovery of overheads attributed to ECC services from Ethernet services. We have reflected this in our cost modelling of active services by reallocating ECC overheads to Ethernet services at 1 Gbit/s and below. We believe this approach strikes the appropriate balance of mitigating the risk of excessive pricing with ensuring cost recovery. Moreover, it provides price stability in this period of transition to a new regulatory regime. For the reasons outlined above, we propose a sub-cap on each individual charge, controlled at CPI+5%.

Contractor ECCs

- 3.81 As outlined above, forecasting Contractor ECCs is difficult and there would be a significant risk of over- or under-recovery if we were to set the prices for Contractor ECCs. As such, we maintain our view that a basis of charges obligation is an effective approach to controlling Contractor ECCs and strikes an appropriate balance between mitigating the risk of excessive pricing while ensuring cost recovery. We propose Contractor ECCs should continue to be subject to a basis of charges obligation.

³⁵ For example, for the Low Bandwidth CISBO Rest of UK 2017/18 figures, the total ECC revenue is £52.9 million, the matched costs are £50.7 million, and the attributed indirect costs are £18.5 million. See BT, Regulatory Financial Statements 2018, page 40.

<https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/2018/RegulatoryFinancialStatements2018.pdf>.

³⁶ BT, Change Control Notification 2017-18, page 21.

<https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/2018/ChangeControlNotification2017-18.pdf>.

³⁷ ECC matched costs stayed flat in 2017/18 while revenues decreased by 15% (see BT, 2018 RFS, pages 40 and 45).

Balancing charge and threshold charge

- 3.82 Our analysis in the 2014 ECC Direction showed that the balancing charge of £548 and the exemption threshold of £2,800 were consistent with revenue neutrality as the revenues BT earned from ECCs under the new charging structure were set to be the same as under the old structure. Revenue neutrality is important to ensure BT can recover its efficiently incurred costs.
- 3.83 As outlined above, we have been requiring BT to use this flexibility to maintain revenue neutrality. The balancing charge is currently set at £722 and is published on Openreach's price list.³⁸ We continue to believe that there is a risk of BT not maintaining revenue neutrality and not recovering its efficiently incurred costs if both the threshold and balancing charge are fixed.³⁹ Therefore, we consider that it is necessary to afford BT with flexibility over either the exemption threshold or the balancing charge.
- 3.84 We do not see a compelling reason to deviate from the approach adopted in the 2016 BCMR. We do not consider that the incidence or distribution of ECCs is likely to change to such a degree that the current approach becomes inappropriate.
- 3.85 Therefore, we propose that BT should be given the flexibility to adjust the balancing charge, but not the threshold charge. This will ensure cost recovery and revenue neutrality in the event of changes in the distribution and incidence of ECCs. However, we propose that the threshold charge should remain fixed at £2,800. We note that BT has the freedom to remove the balancing charge and exemption threshold and return to its previous policy of charging for ECCs as they are incurred.

TRCs

- 3.86 TRCs are levied for services such as out-of-tariff fault repairs and providing or rearranging services where the work is not covered by Openreach's standard charges⁴⁰ TRCs are provided across different markets, including business connectivity and fixed access markets. They are generally charged on a per visit basis, i.e. the Standard Chargeable Visit rate, which includes travel and the first hour of the job, plus any additional hours, i.e. the Additional Hour charge, with the charges varying depending on when the work takes place (e.g. within or outside normal business hours).

³⁸ Openreach, Price List, Ethernet Access Direct (EAD) including EAD Enable.

<https://www.openreach.co.uk/orgp/home/products/pricing/loadProductPriceDetails.do?data=0d0zetWgShsjqKWjcN2Y5WJA8BGGqsBLxL7lgSM4fRpZ6rNZujnCs99NblKJZPD9hXYmijxH6wrCQm97GZMyQ%3D%3D> [accessed 18 October 2018].

³⁹ For example, if the proportion of customers requiring an ECC increases (decreases) or if the average dig distance increases (decreases), then BT's costs will increase (decrease). If the balancing charge and the exemption threshold remain fixed, then BT's revenues will not increase (decrease) in line with costs, meaning that it is not revenue neutral and BT will under-recover (over-recover) its costs.

⁴⁰ Openreach, Price list, Time Related Charges (Including Shifts).

<https://www.openreach.co.uk/orgp/home/products/pricing/loadProductPriceDetails.do?data=pBzHTRfO4GXC12qz7DCzqUP54d5RrQ9TQD%2BRDuYwQUEIMnGHsqdC0vzO163bJmh34D91D7M0q8u%2FIISgtIFAKw%3D%3D> [accessed 18 October 2018].

3.87 In the 2016 BCMR we carried out an in-depth analysis of TRCs to calculate the appropriate level of control. We adopted a controlling percentage which was calculated using a weighted average of the relative proportion of labour and non-labour costs, to which we applied our inflation estimate and efficiency factor respectively. This approach resulted in a controlling percentage of -0.15% per year for the period of the charge control, which we maintained in the Temporary Conditions.

Our proposal

3.88 In Section 13 of Volume 1 we propose to apply charge controls to non-contestable TRCs in the charge control areas. As we explain in Section 12 of Volume 1, TRCs incurred to support dark fibre inter-exchange services will be charged at the same rate as TRCs incurred to support active services, with the exception of the Right When Tested (RWT) charge.

3.89 TRCs revenue accounts for a very small proportion of Ethernet revenue.⁴¹ If included in the main baskets for active services, absent additional controls, BT would have the flexibility to significantly increase the prices of these services and offset this with minor price-cuts to services that would carry a much larger weight. Therefore, given TRCs are a necessary ancillary service in some cases, we consider they should be subject to a specific control. We propose to adopt a similar approach to the 2016 BCMR and adopt a separate basket for non-contestable TRCs.

3.90 In this period of transition to a new regulatory regime, we consider a simplified approach to controlling TRCs to be proportionate. Bearing in mind the objective of regulatory certainty and price stability, we consider a CPI-CPI control is appropriate. We note that this level is broadly the same as under the current controls.

Consultation questions

Question 3.1: Do you agree with each of our proposals in relation to the design of charge controls for active services at 1 Gbit/s and below? Please provide evidence to support your views.

Question 3.2: Do you agree with each of our proposals in relation to the design of charge controls for active VHB services? Please provide evidence to support your views.

Question 3.3: Do you agree with each of our proposals in relation to the design of charge controls for accommodation services, Excess Construction Charges and Time Related Charges? Please provide evidence to support your views.

⁴¹ For example, in the 2016/17 RFS, Ethernet TRCs account for £4.3 million out of £775.4 million Total Revenue in CISBO Rest of UK. BT, Regulatory Financial Statements 2017, page 47.

<https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/2017/RRD2017Final.pdf>.

4. Inter-exchange dark fibre charge control

- 4.1 In this section we set out our proposed approach to estimating costs required to set the level for the inter-exchange dark fibre charge control. Annex 20 provides additional detail behind our proposals.
- 4.2 In Section 12 of Volume 1 we set out our proposal to require BT to provide access to dark fibre for inter-exchange connectivity routes from BT Only exchanges and to impose a charge control on the prices BT would charge for dark fibre access.
- 4.3 As the dark fibre remedy will only be available in areas where there is no existing competition, and we believe the likelihood of additional competition over the review period is low in these areas, we consider that a cost-based control would be appropriate.
- 4.4 In Section 2 we set out the proposed form of charge controls. We explain that, since BT does not currently offer an inter-exchange dark fibre product, we need to assess starting charges for any such products based on our view of efficient costs of providing it. We also propose to apply a CPI-CPI control, based on our starting charges, over the charge control period.
- 4.5 This section sets out our proposals for:
- **Cost standard** – we base our starting level of dark fibre charges on fully allocated costs (FAC). When we use BT’s data from its Regulatory Financial Statement (RFS), we use data prepared on a current cost accounting, as opposed to a historic cost accounting, basis. We note that BT will incur additional costs in providing dark fibre not currently captured in its RFS (we propose to estimate these separately).
 - **Dark fibre services** – we propose to set prices for a set of dark fibre services using the same charging structure as for an EAD circuit: a connection charge, a fixed annual rental charge and a distance-related annual main link charge.
 - **Methodology for estimating efficient costs** – we identify three elements which make up the cost stack for each inter-exchange dark fibre service: passive infrastructure costs, other costs not specific to dark fibre, and dark fibre-specific costs.
 - **Adjustments to cost data** – we use BT’s 2016/17 RFS costs, with some adjustments to make them more suitable for estimating the efficient level of costs of providing inter-exchange dark fibre services. We plan to update our starting charges to use BT’s 2017/18 RFS for our statement.
 - **Pricing of ancillary services** – in Section 12 of Volume 1 we identify two ancillary services specific to dark fibre: a cessation charge and a right when tested (RWT) charge. We propose to set prices on a FAC basis using data provided by BT. We propose that where existing ancillary services are relevant to dark fibre (e.g. TRCs), they should be offered and charged on the same basis as for active services.
- 4.6 We summarise our proposals on each issue below. The indicative starting charges we have derived using 2016/17 cost data are provided in Table 4.1 below. For a circuit of average

length⁴², we estimate that the cost of an inter-exchange dark fibre circuit over three years would be around £4,000 as opposed to around £11,500 for a comparable EAD 1 Gbit/s active circuit.⁴³ We will update our analysis using 2017/18 cost data for our statement.

- 4.7 Finally, we explain why we do not consider it is appropriate to include dark fibre services in a basket. Instead, we propose to set a maximum charge for each dark fibre service. Since we propose to keep dark fibre prices flat in nominal terms, this has the effect of setting the maximum charge for each service equal to our estimates of the starting charges shown in the table below.

Table 4.1: Proposed maximum charges for inter-exchange dark fibre services

Service	Indicative maximum charge ⁴⁴
Dark fibre connection (per circuit)	£733
Dark fibre rental (per circuit per year)	£51
Dark fibre main link (per metre per year)	£0.15
Dark fibre cessation charge (per cessation request)	£192
Dark fibre RWT charge (per fault)	£350
TRCs in support of dark fibre ⁴⁵	Same charges as TRCs for active services (controlled at CPI-CPI)

Cost standard

- 4.8 In Section 12 of Volume 1 we propose to set a cost-based charge control with reference to the relevant components of BT's underlying passive infrastructure, as opposed to adopting an active-minus approach.
- 4.9 To inform our choice of cost standard, we note that setting charges at incremental cost would be consistent with achieving allocative efficiency.⁴⁶ However, for a multiproduct firm with economies of scope, pricing all services at incremental cost would not be sustainable

⁴² See page 241 of BT's 2018 Accounting Methodology Document which states an average circuit length for main links of 7.1km. <https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/2018/AMD2017-18.pdf>.

⁴³ The estimated cost of the inter-exchange dark fibre circuit over three years excludes non-domestic rates (NDRs) which the purchasing telecoms provider would be liable for. We discuss these later in this section.

⁴⁴ The charges in this table are for a one fibre dark fibre circuit. Charges for two fibre dark fibre circuits are in general twice those of a one fibre circuit except for the connection and cessation charges. These exceptions are explained in more detail below and in Annex 20.

⁴⁵ Note, the dark fibre inter-exchange services have a distinct RWT charge, which is separate from the active RWT charge.

⁴⁶ If charges are set at the forward-looking incremental cost, then purchasers who value the service at least as much as its incremental cost have the opportunity to purchase it.

as the firm would not be able to recover its common costs. When common costs need to be recovered through charges, some (though not necessarily all) service prices need to be marked up above incremental cost. Including a mark-up will lead to some inefficiency, and a pricing rule, such as Ramsey pricing⁴⁷, can be used to minimise this inefficiency. However, using a Ramsey pricing approach has practical difficulties due to the amount of information on the elasticity of demand that is required. Regulators therefore tend to use other methods to set prices in practice, for example, by allocating common costs based on FAC or long-run incremental costs plus some mark-up for common costs (LRIC+).

- 4.10 FAC usually reflects using accounting rules and assumptions for the recovery of common costs for different services. When accounting data is prepared on a current cost accounting (CCA) basis, the data reflects forward-looking costs rather than the actual prices at the time the relevant assets were purchased, giving better signals for efficient investment and entry rather than historic costs. Costs on a LRIC+ basis also usually reflect forward-looking costs.
- 4.11 In practice there is often little difference between CCA FAC and LRIC+.⁴⁸ When setting charge controls on BT using BT's accounting cost data, we have typically done so based on a CCA FAC standard. Charges set on this basis should encourage entry where the entrant is as or more efficient than BT. In addition, it has the advantages of being transparent and practicable to implement as BT's costs are known and are based on its RFS which are publicly available to stakeholders each year.
- 4.12 We therefore consider that the most practical and transparent option is to start from BT's CCA FAC data and use data from BT's RFS where possible when estimating the unit FAC for inter-exchange dark fibre services. As explained below, BT is likely to incur additional costs not currently captured in the RFS in providing dark fibre. We propose to estimate these separately but, as far as practicable, to estimate the unit FAC of these additional costs.

Proposed dark fibre services

- 4.13 In Section 12 of Volume 1 we note that the majority of current inter-exchange connectivity from BT Only exchanges use BT's EAD products.
- 4.14 The typical charging structure for BT's EAD product is:
- a one-off connection charge;
 - a fixed annual rental charge; and
 - a distance-related annual main link charge which applies if the two ends of an EAD circuit are served by different BT exchanges.⁴⁹

⁴⁷ Ramsey pricing allocates common costs on the basis of relative inverse demand elasticity (a measure of how responsive demand is to price).

⁴⁸ For example, as discussed at paragraph 3.19 of Ofcom, 2012, *Charge control review for LLU and WLR services – Statement*. https://www.ofcom.org.uk/data/assets/pdf_file/0024/53808/statementmarch12.pdf.

⁴⁹ The main link charge depends on the radial distance between the two BT exchanges.

- 4.15 We propose to set starting charges for a corresponding set of inter-exchange dark fibre services: a connection, a rental and a main link. We discuss ancillary services associated with dark fibre later in this section.
- 4.16 Finally, in Section 12 of Volume 1 we propose to require BT to offer both one and two fibre dark fibre circuits. In general, we propose that the charges for the two fibre variants should be twice those for the one fibre variant as we have not identified any material cost savings that would result from providing or maintaining two fibres on a circuit compared to one. There are two exceptions to this general principle for the one-off connection charge and for one of the ancillary services, cessations. We provide more details on these exceptions below and in Annex 20.

Methodology for estimating efficient costs

- 4.17 We construct the cost stack for each inter-exchange dark fibre service (i.e. connection, rental and main link) from the following three elements:
- Costs relating to passive infrastructure required for an inter-exchange dark fibre circuit (element A). For example, this would include the costs of the fibre that runs between the exchanges.
 - Other costs that are required for, but not specific to, an inter-exchange dark fibre circuit (element B). For example, this would include the costs of service centre staff who manage provision and maintenance queries or product management people. The costs of such people are generally allocated across a range of different services.
 - Costs that are specific to an inter-exchange dark fibre circuit (element C). For example, Openreach needs to install a patch panel to provide a termination point for the fibre within the exchange. Openreach does not have to install a patch panel when providing active services.
- 4.18 We consider that the relevant costs that BT incurs when providing an EAD circuit provide the best reference point for estimating the likely costs of an inter-exchange dark fibre circuit. We therefore use CCA FAC information on EAD services derived from BT's RFS to inform our estimates of elements A and B. However, since BT does not currently provide dark fibre circuits, it is not possible to use information from within BT's RFS to inform our estimates of element C. We have therefore constructed these cost estimates using an engineering led approach, building on the approach Openreach used when preparing its draft Reference Offer for dark fibre services in 2016.⁵⁰

⁵⁰ We discuss the approach to these costs further below and in Annex 20.

Methodology for estimating elements A and B

- 4.19 To estimate elements A and B, we have started from the CCA FAC unit costs within BT's RFS for Openreach's standard EAD connection⁵¹, rental and main link services, broken down by component.⁵² We have classified the components used to provide EAD services as relating either only to the active or passive elements of EAD services or as being 'shared' between the active and passive elements. Active components (e.g. Ethernet Electronics) are not required to provide an inter-exchange dark fibre circuit and so are not relevant to our cost estimates. However, some or all of the costs of passive components (e.g. Ethernet Main Links) and shared components (e.g. Sales Product Management) may be required to provide an inter-exchange dark fibre circuit. We explain in Annex 20 how we have classified each component as being passive, active or shared, and then how much of the costs of passive components we have included when calculating element A, and how much of the costs of shared components we have included when calculating element B.
- 4.20 In its 2016/17 RFS, BT reported the costs of EAD services separately for each regulated combination of bandwidth (10 Mbit/s, 100 Mbit/s, 1 Gbit/s) and geographic market ('Rest of UK' and 'London Periphery').⁵³ In this consultation, we base our estimates of elements A and B on the cost data for BT's EAD 1 Gbit/s service in the Rest of UK market from its 2016/17 RFS. In the final statement we propose to use equivalent data from its 2017/18 RFS. This approach will allow all stakeholders to understand the broad level of costs we propose to use from data published in BT's RFS.⁵⁴
- 4.21 We use the costs for the 1 Gbit/s services because our analysis shows that the resulting estimates of elements A and B do not vary materially depending on the selected bandwidth or if using a blended unit cost across all bandwidths. This is because differences in costs for EAD services by bandwidth are primarily driven by differences in the cost of active components, rather than differences in the cost of passive and shared components.
- 4.22 We use the costs for the 'Rest of UK' market in this consultation and propose to use those in the CISBO Low Bandwidth 'Rest of UK' market⁵⁵ in our statement because almost all BT Only exchanges are in these market areas.

⁵¹ The 'standard' variant of BT's EAD service can be used to connect any two served locations. It consists of a 'main link' if the locations are served by different BT exchanges. It can also consist of up to two 'local access' segments depending on whether (and how many of) the two served locations require connecting to their corresponding local BT exchanges.

⁵² BT allocates costs to components which represent 'discrete parts of [its] network' such as Ethernet Electronics, Ethernet Access Direct Fibre and Sales Product Management. Component costs are then attributed to services using usage factors. See page 201 of BT's 2018 Accounting Methodology Document.

⁵³ The 2016/17 RFS reflect the geographic market definitions adopted in the 2016 BCMR, while the 2017/18 RFS reflect the revised geographic market definitions adopted in the Temporary Conditions. Both sets of accounts report costs separately for 'Rest of UK'; the precise area covered by 'Rest of UK' is slightly different, but we consider that this is the relevant geographic market to base our analysis on, regardless of whether 2016/17 or 2017/18 data is used.

⁵⁴ Stakeholders are unlikely to be able to recreate our calculations exactly as we also reflect the base year adjustments outlined in Annex 19.

⁵⁵ By the Rest of UK and CISBO Low Bandwidth Rest of UK markets we mean as defined within BT's 2017 RFS and 2018 RFS respectively.

2016/17 cost data used for elements A and B

- 4.23 In Annex 19 we explain the adjustments that we make to BT's 2016/17 RFS costs for active services to better reflect our view of BT's efficiently incurred costs. We use the resulting adjusted 2016/17 costs as the base year when undertaking our cost modelling for active services, which we discuss in more detail in Annex 18.
- 4.24 We use the same adjusted base data when estimating elements A and B. The key adjustments that affect the starting charges for inter-exchange dark fibre services are that we have:
- Adjusted the valuation of BT's fibre assets using an approach which we consider to be the most suitable proxy for CCA valuation.
 - Reflected the cost impact of the other methodology changes outlined in BT's 2018 Change Control Notification (CCN). These have been implemented in BT's 2017/18 RFS and so will contribute to the base data that will form the basis for our estimates for our statement.⁵⁶
 - Adjusted BT's service level guarantee (SLG) payments in the base year to reflect our view of an efficient level of SLG payments.
 - Excluded costs of Openreach's repayments programme. These relate to alterations requested or damages caused by third parties to Openreach's network. All repayments programme revenue is recognised in Openreach's residual markets and so we consider that the costs should also be recognised in residual markets, not regulated markets.
 - Excluded costs relating to the integration of EE following its acquisition by BT in 2016.
 - Increased BT's pension costs to reflect the increase that is expected following BT's agreements with the trade unions in early 2018.
 - Adjusted one-off restructuring charges and property rationalisation provision costs to reflect a three-year moving average over the period 2014/15 to 2016/17. This reduces the year-on-year volatility of these costs and the amount of discretion that BT has in relation to the level of these costs.
- 4.25 We describe two other material adjustments in Annex 19 relating to BT's cumulo costs and Excess Construction Charges (ECCs). However, neither of these adjustments has an impact on the costs of elements A and B because, for reasons outlined in more detail in Annex 20, we do not include BT's cumulo costs or the costs of ECCs in the cost stack for inter-exchange dark fibre services:
- BT's cumulo costs are the non-domestic rates (NDRs) that it pays on its rateable assets that include duct and fibre assets. NDRs are a form of property tax and legal precedent has established that it is the telecoms provider that lights the fibre who is responsible for the NDRs on the circuit. Therefore, we have not included any of the NDRs that BT pays in the cost stack for inter-exchange dark fibre services.

⁵⁶ Not all of these affect the starting costs for dark fibre services. For example, we do not include the costs of Ethernet Electronics in our cost stack for inter-exchange dark fibre services so the CCN methodology change has no impact on our starting prices.

- The price of the EAD connection service includes a balancing charge for ECCs to cover construction costs up to a threshold, currently £2,800. However, we consider that most inter-exchange dark fibre orders will not require any new construction work and so we do not consider it appropriate to include a balancing charge for ECCs in the inter-exchange dark fibre connection service cost stack.
- 4.26 We plan to update our estimates of dark fibre starting charges using cost data from BT’s 2017/18 RFS for our statement. We propose to apply most of the adjustments above to 2017/18 data. However, we would no longer need to adjust for changes outlined in BT’s 2018 CCN as these will already be reflected in the 2017/18 RFS (with the exception of the fibre revaluation change included in 2018 CCN⁵⁷).
- 4.27 The base year FAC data that we use to derive estimates of the elements A and B includes pay and non-pay operating costs, depreciation (on a CCA basis) and a return on capital employed. We have revised the return on capital employed to reflect our latest view of the forward-looking cost of capital. As we are interested in BT’s efficiently incurred costs, we think it is appropriate to reflect our updated WACC estimates (rather than simply carry over the value included in BT’s RFS FAC data⁵⁸). As set out in Annex 21, we propose that the relevant WACC for dark fibre services (within our disaggregation framework for BT Group WACC) is the Other UK Telecoms WACC.⁵⁹ Our latest estimate of the pre-tax nominal WACC for Other UK Telecoms is 8%.

Methodology for estimating element C

- 4.28 In the 2016 BCMR Statement we required BT to offer dark fibre services and provided guidance for how prices should be set. We defined three components of the price within what we called the active differential, the third of which was “any objectively justifiable differences between the dark fibre product and the corresponding active service”.⁶⁰ In Annex 23 we noted that some justifiable differences were likely and, for example, that different handover arrangements for dark fibre may require an additional piece of equipment (e.g. a patch panel).⁶¹
- 4.29 On 1 December 2016 Openreach published its Dark Fibre Access (DFA) Final Reference Offer (FRO).⁶² This did not contain any breakdown of prices into the three components of the price as outlined in our guidance.
- 4.30 Openreach explained to us that it had included the costs of two main activities as part of the third component when setting its DFA FRO prices: the costs of installing patch panels

⁵⁷ As explained in more detail in Annex 19, we propose a different valuation methodology for fibre assets to that used by BT in its 2017/18 RFS.

⁵⁸ BT’s RFS FAC would reflect the WACC estimated in the 2016 BCMR Statement, meaning it is several years out-of-date.

⁵⁹ This is the same WACC that we use to inform our cost modelling of active services.

⁶⁰ See, for example, paragraph A23.117 of the 2016 BCMR Statement.

⁶¹ See paragraph A23.24 of the 2016 BCMR Statement.

⁶² Openreach, 2016, *Dark Fibre Access (DFA) Final Reference Offer Pricing document*.
<https://www.openreach.co.uk/orpg/home/products/darkfibreaccess/darkfibreaccess/downloads/DFAfinalreferenceofferpricing011216.pdf>.

and initial testing costs. This was in line with our expectations in the 2016 BCMR Statement as noted above.

- 4.31 We estimate the costs of patch panels and initial testing activities using a similar methodology to that used by Openreach when preparing its prices for the December 2016 DFA FRO. We estimate the direct equipment and labour costs (using standard labour rates) and then apply a mark-up for overhead costs to the labour rate to estimate fully allocated costs. We explain in more detail how we have estimated these costs together with the underlying assumptions in Annex 20. We note that the costs of initial testing activities, which we include in the connections price, should be the same regardless of whether a one or two fibre circuit is installed. This leads to a connection price for a two fibre circuit that is less than double that for a one fibre circuit.

Summary of indicative starting charges by element

- 4.32 The table below shows indicative starting charges for the main inter-exchange dark fibre services broken down by elements A, B and C using data relating to 2016/17.

Table 4.2: Indicative starting charges for inter-exchange dark fibre services

Element of cost stack	Connection (per circuit)	Rental (per circuit per year)	Main Link (per metre per year)
A: passive infrastructure costs	£3	£0	£0.14
B: other costs not specific to dark fibre	£599	£42	£0.01
C: costs specific to dark fibre	£131	£9	£0.00
Total	£733	£51	£0.15

- 4.33 We estimate that for a circuit of average length⁶⁴, the cost over three years of an inter-exchange dark fibre circuit would be around £4,000 based on the above prices, compared to around £11,500 for an equivalent EAD 1 Gbit/s circuit⁶⁵ based on current Openreach prices.

- 4.34 These EAD charges include BT's costs of non-domestic rates (NDRs) whereas those for the inter-exchange dark fibre circuit do not, because, as noted above, NDRs are the

⁶³ The indicative starting connection charge for a two fibre dark fibre circuit is £1,334. All other charges for a two fibre circuit would be twice those for a single fibre circuit.

⁶⁴ See page 241 of BT's 2018 Accounting Methodology Document which states an average circuit length for main links of 7.1km.

⁶⁵ Three-year costs for dark fibre and EAD 1 Gbit/s circuits calculated as: connection charge + 3 * (rental charge + main link charge per km * 7.1km). Dark fibre charges used are as shown in Table 4.2 above. EAD 1 Gbit/s charges used are as shown in Openreach's EAD price list for a circuit with a 12-month minimum period as of 18 October 2018 (£1,850, £1,944 and £0.18 for connection, rental and main link respectively). See Openreach, Price List, Ethernet Access Direct (EAD) including EAD Enable:

<https://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=0d0zetWgShsiqKWjcN2Y5WJA8BGGqsBLxL7lgSM4fRpZ6rNZujnCs99NbiKJZPD9hXYmiiixH6wr%0ACQm97GZMyQ%3D%3D> [accessed 18 October 2018].

responsibility of the provider who lights the fibre. We estimate that a telecoms provider purchasing an inter-exchange dark fibre circuit of average length would be liable for around £2,100 in NDRs over three years, under current rating arrangements.⁶⁶

Ancillary services

4.35 For BT to provide inter-exchange dark fibre services it would also need to provide ancillary services. These ancillary services can be divided into two groups:

- those that are equivalent to services that BT already offers for active services (e.g. TRCs); and
- those that BT does not currently offer which would be specific to inter-exchange dark fibre services.

4.36 In Section 12 of Volume 1 we propose that ancillary services in the first group should be offered and charged for on the same basis as for active services.

4.37 We identify two new ancillary services specific to inter-exchange dark fibre services and propose to set cost-based prices for these services, namely:

- a cessation charge; and
- a right when tested (RWT) charge.

4.38 Below we summarise our pricing proposals for these two new ancillary services. We provide more details in Annex 20.

Cessation charge

4.39 A dark fibre circuit needs to be physically broken by an engineer to stop it from being used when it is no longer being charged for. This contrasts with the cessation process for an active service, such as EAD, that can be ceased remotely using the active equipment.

4.40 We have estimated a FAC of £192 for this service based on 2016/17 labour rates and assumptions on the activities involved and how long each would take. The charge does not vary with the number of fibres that are being broken in the circuit, i.e. for a two fibre circuit, the charge is the same if one or both fibres are being broken. For our statement, we plan to use 2017/18 labour rates and review the activities and timings to reflect stakeholder comments.

⁶⁶ This estimate is based on the same assumptions as set out in the revised guidance that we gave in the 2017 NDR Statement for how BT should exclude NDRs from the price of the dark fibre services for purchasers of dark fibre circuits whose rates are assessed under the Direct Rental Comparison method. The annual NDR cost is calculated by: multiplying the 2018/19 English rate in the pound (£0.498); by the VOA's rateable value per km per annum for a single fibre for a telecoms provider with a network of 1,000km or more (£200 per km per year) from its Fibre Rent Tone (Valuation Office Agency, 2017, *Rating Manual*, Section 871: telecommunications fibre optic networks. <https://www.gov.uk/guidance/rating-manual-section-6-part-3-valuation-of-all-property-classes/section-871-telecommunications-fibre-optic-networks> [accessed 24 October 2018]); and a route distance of 7.1km.

RWT charge

- 4.41 Openreach's DFA FRO proposed that faults reported to Openreach that were ultimately cleared as RWT by an Openreach engineer may be subject to a charge. The RWT charge is intended to encourage telecoms providers to carry out diagnostic testing before reporting a fault. This increases the likelihood that reported faults on dark fibre circuits relate to Openreach's passive infrastructure, rather than to the purchasing telecoms provider's electronic equipment or network.
- 4.42 Openreach's DFA FRO specified that a RWT charge would apply only to RWT faults exceeding 6% of the overall fault volumes reported by a telecoms provider (assessed on a quarterly basis). Openreach stated that any RWT faults within this threshold would be charged using TRCs in line with the contract.⁶⁷ In Section 12 of Volume 1 we propose that Openreach should be able to levy a RWT charge subject to this threshold and to set a cost-based price for a RWT charge.
- 4.43 We have estimated a FAC of £350 associated with a RWT fault on a dark fibre circuit based on 2016/17 labour rates and assumptions on the activities involved and how long each would take. For our statement, we plan to use 2017/18 labour rates and review the activities and timings to reflect stakeholder comments.

Charge control design

- 4.44 Our approach to charge control design (as explained in Section 3) is generally to include services in broad baskets of related services, where appropriate, as the flexibility it provides is more likely to result in charges that recover common costs in an efficient way.
- 4.45 In Section 3 we propose to use prior year weights (where feasible) when assessing charge control compliance. However, Openreach does not currently offer a dark fibre service. Any new dark fibre services will, by definition, have no associated volumes when they are first offered commercially. Therefore, we would not be able to use prior year weights to assess compliance in the first year of the control.
- 4.46 Moreover, to give BT sufficient time to set its year two price in compliance with the control, we would be unable to consider volumes across the entirety of year one of the control. We think it unlikely that, given this limitation, there will be sufficiently representative volume data on which to base prior-year weights and hence, allow BT to calculate charges that comply with the control.
- 4.47 One alternative would be to use current year weights to assess compliance with our controls on dark fibre inter-exchange services. However, given the disadvantages with this approach outlined in Section 3, we do not consider that it is appropriate. In particular, as explained in Section 12 of Volume 1, we recognise that dark fibre orders may take time to ramp up following launch and that the speed of take up is uncertain. Given the uncertainty associated with the introduction of new services, it would be even more difficult for us to

⁶⁷ Page 8 of Openreach DFA FRO pricing document, 2016.

assess BT's forecasts and therefore, there would be greater residual risk of the controls being able to be gamed.

- 4.48 Consequently, we do not consider it is practicable or appropriate to include dark fibre services in a basket. Instead, we propose to set individual controls on each dark fibre service. These individual controls could either be in the form of a target average for each charge over the year or of a maximum cap on each charge across the year.⁶⁸
- 4.49 Target average charges would give Openreach some degree of pricing flexibility, allowing it to set charges above the target for some of the year if it balances this with compensating charges below the cap for the remainder of the year. Under this approach prices are weighted by the proportion of the year that the price is in effect. When the volume of a service is changing significantly over the year, weighting by time period can lead to the control recovering more or less than was intended. Given the uncertainty around the growth of dark fibre during the charge control period, we believe there is a material risk that the charge control could be gamed if we use a target average charge approach. Therefore, to avoid the need for weighting over the year, we propose to set a maximum charge on each individual dark fibre service.
- 4.50 Given our proposal to keep dark fibre prices flat in nominal terms over this review period, we propose to effectively set a maximum charge based on our estimates of starting prices (derived using the methodology described in this section). Table 4.1 above summarises the individual maximum charges proposed for dark fibre services.⁶⁹

Consultation question

Question 4.1: Do you agree with our proposals in relation to the design of a charge control for inter-exchange dark fibre? Please provide evidence to support your views.

⁶⁸ We note that neither of these approaches limits Openreach from setting the price of dark fibre below the maximum charges we have set.

⁶⁹ As explained in Annex 20, these are indicative prices based on costs from BT's 2016/17 RFS, after adjustments. We plan to update our analysis for our statement using cost data from BT's 2017/18 RFS.

5. Implementation, compliance and legal tests

- 5.1 In this section we explain how the proposed charge controls will work in practice. We explain how the draft legal instrument at Annex 23 gives effect to the charge control proposals, and how we will check that BT complies with them.
- 5.2 In addition, we explain why we consider that our proposal to impose charge controls in the form set out in the draft legal instrument satisfies the legal tests set out in the Act and why we consider that, in making our proposals, we have complied with our duties. We also explain how we have taken due account of all applicable recommendations of the European Commission under Article 19(1) of the Framework Directive, and the BEREC Common Positions.

Implementation of proposals

- 5.3 Draft SMP Condition 10 in Annex 23 would have three key effects. It would:
- set charge controls to 31 March 2021 for the services specified;
 - ensure that average charges subject to CPI-CPI charge controls do not change by more than the value of the charge control formula, as specified, and/or charges do not exceed the sub-caps; and
 - require BT to provide information annually to Ofcom to enable compliance monitoring.
- 5.4 In this subsection, we discuss the practicalities of:
- how the charge controls will work alongside other regulation;
 - the baskets and services covered by the conditions; and
 - how we will ensure compliance with the charge ceilings created by the CPI-CPI controls.

Interaction with other remedies

- 5.5 In Section 11 of Volume 1 we propose to impose remedies, in the form of draft SMP conditions, to address the competition concerns that arise where BT has SMP. The draft SMP conditions would require BT to:
- provide network access on reasonable request, which includes that access must be provided on fair and reasonable terms and conditions (which includes charges in the absence of applicable charge controls or basis of charges obligations) (Condition 1);
 - provide specific forms of network access (Condition 2);
 - not unduly discriminate in relation to matters connected with network access (Condition 3);
 - provide network access on an Equivalence of Inputs basis, except in relation to existing network access not being provided on an Equivalence of Inputs basis as at the date of entry into force of the SMP condition (Condition 4);
 - publish a Reference Offer (Condition 5);

- notify charges and technical information (Conditions 6 and 8);
- comply with all such quality of service requirements and publish quality of service KPIs as Ofcom may, from time to time, direct in relation to network access provided by BT pursuant to Conditions 1 and 2 (as applicable) (Condition 7);
- set out and follow a process in relation to requests for new forms of network access (Condition 9); and
- comply with rules on regulatory financial reporting (Condition 11).

5.6 The leased lines charge controls that we propose as draft SMP Condition 10 are designed to work alongside the conditions listed above to address proportionately competition concerns identified in Section 10 of Volume 1. They do not duplicate other remedies, whether in part or in full, or combine with them to produce unintended consequences.

Baskets and services covered by the conditions

5.7 The structure of draft SMP Condition 10, giving effect to the basket design discussed in Section 3, is as follows:

- Draft SMP Condition 10A covers Ethernet services grouped into one of two baskets: the Ethernet (1 Gbit/s and below) Services Basket or the Ethernet and WDM (over 1 Gbit/s) Services Basket. The annex to Condition 10A lists the groups of services that fall within each basket.
- Draft SMP Condition 10B covers dark fibre services, with each service subject to an individual maximum charge (there are no dark fibre baskets). Condition 10B.1 lists the services that we expect to fall under this control.
- Draft SMP Condition 10C covers accommodation services and overlapping accommodation services contained within the accommodation services basket. The Annex to Condition 10C lists the services that fall within this basket.
- Draft SMP Condition 10D covers ECCs. There is a basket for Direct ECCs and a basis of charges obligation on Contractor ECCs. The annex to Condition 10D lists the services that fall within the Direct ECC Services basket and under the basis of charges obligation on Contractor ECC Services.
- Draft SMP Condition 10E covers TRCs contained in one basket. The annex to Condition 10E lists the services that fall within this basket.

Formulae to determine how the Percentage Change is calculated for each service

5.8 The SMP conditions, as proposed, will have the following effects that relate to the charge controls:

- The conditions will set charge controls until 31 March 2021 for the services specified. This is done by means of the **Controlling Percentage formulae**.
- The conditions will ensure that average charges subject to charge controls are no higher than required by the Controlling Percentages, as specified. This is done by means of the **Percentage Change formulae**.

- 5.9 In the previous LLCC we used starting charge adjustments in our formulae. However, as discussed in Section 2, we do not consider that they are necessary in the present case. Where we are not currently charge-controlling a service, we will do the following:
- for active VHB services, the base price will be the price charged on 1 October 2018, excluding certain discounts as set out below; and
 - for dark fibre, we will establish a base price for each controlled service using data requested from BT (these will be set out in our statement).⁷⁰
- 5.10 For the Controlling Percentage formulae used in the first year of the charge control, we propose to use the CPI for the 12 months prior to 30 November 2018. As this would be at least four months prior to the start of the charge control, we consider that this provides BT with sufficient time to implement price changes within the appropriate notification periods. For all subsequent years, we also propose that the value of CPI for the 12 months prior to 30 November immediately before the beginning of the relevant year should be used to assess compliance with the charge control.
- 5.11 Table 5.1 below outlines the specific parts of the conditions where the charge control formulae relevant to each of the baskets and services are set out.

Table 5.1: Charge control formulae applied to baskets and services

	Controlling Percentage	Percentage Change
Ethernet (1 Gbit/s and below) Services Basket	Condition 10A.4	Condition 10A.3
Cablelink Sub-basket	Condition 10A.4	Condition 10A.3
Each individual Ethernet (1 Gbit/s and below) Service	Condition 10A.8	Condition 10A.9
Ethernet and WDM (Over 1 Gbit/s) Services Basket	Condition 10A.4	Condition 10A.3
Each individual Ethernet (Over 1 Gbit/s) Service	Condition 10A.8	Condition 10A.9
Accommodation Services Control	Condition 10C.3	Condition 10C.2
Direct ECC Services Basket	Condition 10D.3	Condition 10D.2
Direct ECC Services Sub-cap	Condition 10D.8	Condition 10D.7
Ethernet TRC Services Control	Condition 10E.3	Condition 10E.2

⁷⁰ Our approach to dark fibre pricing is discussed in Annex 20.

	Controlling Percentage	Percentage Change
Contractor ECC Services Control	Contractor ECC Services are controlled with a basis of charges obligation, as set out in Condition 10D.9	
Dark Fibre Access Services	Dark Fibre Access Services are controlled with specific prices, as set out in Condition 10B.1	

Rules used to determine compliance

Deficiency and excess provisions

- 5.12 Deficiency and excess provisions set out how any under- or over-recovery in a charge control period should be dealt with.
- 5.13 These provisions have been included in previous charge controls and we propose to use them for the individual services and baskets of services that will be subject to charge controls as part of this review. These provisions are set out in detail in draft SMP Condition 10A.6 and have two functions:
- Where BT charges below the cap, subject to the exclusion of certain discounts as set out below, they give the ability to use the deficiency created by setting charges below the charge control requirements within a given year towards the charge control compliance in the following year. Therefore, the deficiency avoids penalising BT for bringing forward a charge reduction or increasing charges less than permitted within the cap.
 - Where BT charges above the cap, it is required to make up the excess the following year by charging less than the cap would otherwise have allowed. We expect any difference to be small and not adversely affect the pricing stability created by the CPI-CPI control.
- 5.14 We consider that symmetrical provisions remain appropriate i.e. symmetrical with respect to whether BT charges below the cap or whether the control is exceeded. We therefore propose to continue using deficiency and excess provisions for our charge controls.
- 5.15 We also propose to continue to require BT to make repayments to other affected telecoms providers (as soon as is reasonably practicable) if it charges in excess of the cap in any given year for any services or basket of services, excluding dark fibre.

Use of discounts for compliance calculations

- 5.16 We propose to no longer allow time-limited discounts (marketed as special offers) to count towards BT's compliance with the charge control. This approach is consistent with our decisions in the 2018 WLA Statement.
- 5.17 These discounts are no longer being used to encourage migration from legacy to new technologies and in previous years these discounts have not led to permanent price

reductions. The list price of services that have been the subject of time-limited discounts have remained relatively static despite frequent time-limited discounts. We illustrate this through the example of EAD 100Mb connections in Table 5.2 below.

Table 5.2: BT EAD 100Mb connection time-limited discounts (excl. VAT), 2013-18

Dates	01/06/2013 – 31/10/2013	01/04/2014 – 31/05/2014	05/04/2016 – 30/09/2016	01/04/2017 – 31/03/2018	01/04/2018 – 30/09/2018
Duration (months)	5	2	6	12	6
Discount from list price	50%	28%	51%	66%	24%
Discounted price (£)	£975	£1,402	£950	ECC fixed fee of £656 ⁷¹	£1,425
List price (£) ⁷²	£1,950	£1,950	£1,950	£1,925	£1,875

Source: Openreach website⁷³

- 5.18 In addition, we are concerned that time-limited discounts have caused frequent, and sometimes significant, fluctuations in the effective price of services. This does not align with the pricing stability that is important in encouraging investment.
- 5.19 We propose to continue to allow three- and five-year term products to count towards compliance, and not allow volume and geographic discounts to count towards compliance. This is in line with our approach in the 2016 BCMR Statement.⁷⁴ Volume discounts would favour BT due to its high market share and these discounts could distort competition downstream. As such, we propose not to allow them to count towards the charge control. Geographic discounts could be used in an anti-competitive manner by discounting prices in competitive areas and raising standard prices in less-competitive areas (due to being allowed to differentiate prices geographically). Therefore, we propose that they will also be excluded.

⁷¹ The excess construction charge for three months (01/04/2017 – 30/06/2017) of this 12-month period was £663.50.

⁷² Where there are changes to pricing within the date ranges, the price at the end of the date range is listed in Table 5.2. From 1 June 2014, EAD connection charges include an ECC Fixed Fee.

⁷³ <https://www.openreach.co.uk/org/home/products/pricing/loadProductPriceDetails.do?data=0d0zetWgShsjqKWjcN2Y5WJA8BGGqsBLxL7lgSM4fRpZ6rNZujnCs99NbiKJZPD9hXYmijxH6wrCQm97GZMYQ%3D%3D>.

⁷⁴ <https://www.openreach.co.uk/org/home/products/pricing/loadProductPrices.do?data=CHwaDmuSf84idOYbWK2Y39pyYOJW58IELJ3a1hFsXScqDWVqEbA2PDIT5Y2OhxKv>.

⁷⁴ 2016 BCMR Statement, Annex 34.

BT may change list prices at any time and the formula accounts for the timing of those changes

- 5.20 BT can change standard charges for services at any time during a particular year. However, the charge control formula explicitly takes into account *when* changes to charges occur (subject to the exclusion of certain discounts discussed above).
- 5.21 If BT were to introduce a charge reduction on the last day of a particular year, it would be better off, in revenue terms, compared to making a charge reduction on the first day of the year. Our compliance formula adjusts for this. If BT reduces charges later in the formula year, the reduction would need to be greater to achieve compliance with the basket control, because their revenue prior to making the reduction would be greater than if the charge was reduced earlier in the formula year.

We propose to use prior period revenues to weight price changes by BT

- 5.22 Where we propose to implement baskets, we propose to weight each service within a basket to allow us to assess BT's compliance with the controls. To calculate weights in this context, regulators generally use one of two approaches: prior period revenues or current period revenues. These approaches produce different results where volumes and volume mix are not stable, as in the case of leased lines.
- 5.23 We propose to use the prior period approach, as discussed in Section 3, consistent with the 2016 BCMR Statement. However, we propose to use RFS revenues as the basis for compliance in this charge control, reducing the time lag for prior period weights by moving to prior year revenue in the financial year immediately preceding the charge control period. This is consistent with the approach we adopted in the 2018 WLA charge control. This will also lead to better transparency, as BT will use revenues and volumes reported in its RFS.

Balancing charge and threshold charge for ECCs

- 5.24 As discussed in Section 3, we propose that BT should be given the flexibility to adjust the balancing charge, but not the threshold charge throughout the control period. To ensure that BT uses the flexibility appropriately, it is required to demonstrate as part of its charge control compliance that its balancing charge is set to ensure revenue neutrality. Many of the difficulties associated with complying with a basket control also apply to setting an appropriate balancing charge. For example, ensuring revenue neutrality in the current year requires BT to forecast the incidence and distribution of ECCs.
- 5.25 At the end of each financial year, BT should determine what its ECC revenues would have been in the prior period in the absence of a balancing charge for EAD connections, i.e. if all ECCs were charged using the Openreach price list. BT should then divide the 'exempted' ECCs by the number of EAD connections in the prior period to arrive at the new balancing charge, which will be used for the following year. Further details of this calculation are provided in Annex 23.
- 5.26 Consistent with the proposed weighting approach for assessing compliance for other baskets and with the 2016 BCMR, we continue to consider that the balancing charge

should be calculated using prior year weights. This is due to the practical advantage of using prior year weights rather than in-year weights.

Notification periods for price reductions

5.27 We propose to impose requirements on BT relating to the notification period for changes to charges, specifically 28 days' notice for new services or price reductions and 90 days' notice for all other changes, including price increases. We discuss our proposals relating to notification periods in Section 11 of Volume 1.

'Material changes' to charge-controlled services

5.28 We propose to include general provisions which relate to material changes that could impact the charge controls' effectiveness. This is because we propose to set controls with reference to a set of products that Openreach currently offers (except dark fibre services), recognising that they may be amended or removed (or new services relevant to the remedy introduced) within the charge control period.

5.29 These proposed provisions give us the power to update the controls if such changes warrant it by giving a direction under these conditions, following a consultation under the relevant procedures under the Act.

5.30 The proposed provisions are included in each of the draft SMP conditions and cover any material changes, other than to a charge, including to:

- the date on which BT's financial year ends;
- the basis of the Consumer Price Index; and
- a material change to any product or service, which can include the introduction of a new product or service wholly or substantially replacing the existing product or service.

5.31 For example, a single new service that falls within the scope of the relevant Ethernet basket cap should remain subject to that same overall basket cap for the duration of the charge control period, regardless of whether BT has altered the underlying technology used to provide that service. We consider that this provision ensures there is an incentive to introduce new, more efficient services, and protects the effectiveness of the remedies.

5.32 Where Openreach introduces multiple services that replace a previous existing service, the new services will remain subject to the same overall basket (and, where relevant, sub-basket) control for the duration of the charge control period. In such a circumstance, the same form of charge control will apply to each individual service.

5.33 We do not propose to include completely new products (i.e. not a replacement product) in the charge control where these are introduced during the charge control period. If a product is withdrawn with no replacement, the prior year weight should be set to zero.

Information from BT

5.34 We propose to require BT to supply information to allow us to monitor its compliance with the controls. Consistent with the obligations in place in the previous charge controls, BT

would be required to provide this information annually to Ofcom, no later than three months after the end of the charge control year. This requirement is set out in draft SMP Conditions 10A.15, 10B.3, 10D.15 and 10E.7. BT will also be required to publish non-confidential compliance schedules, which we will set out in our forthcoming consultation on regulatory reporting.

Non-compliance by BT

5.35 In the event of non-compliance with any conditions and directions imposed following consultation, we may open an investigation into BT's compliance with the charge control. Any investigation would be conducted in line with our enforcement guidelines.⁷⁵

Legal tests

5.36 We provisionally consider that each of the proposed charge controls on wholesale leased lines services would satisfy the legal tests set out in the Act and would be in accordance with our legal duties.

5.37 We set out below why we provisionally consider that each proposed control:

- is authorised under section 87(9) and satisfy the related conditions in section 88;
- fulfils the tests in section 47(2) of the Act;
- has been formulated in compliance with our relevant statutory duties, particularly those under sections 3 and 4 of the Act; and
- has been formulated taking utmost account of the EC Leased Lines Pricing Recommendation and BEREC Common Position.

Authorisation under section 87(9); satisfaction of section 88 conditions

5.38 Section 87(9) of the Act authorises Ofcom to set SMP conditions which impose on the dominant provider:

- charge controls in relation to matters connected with the provision of network access to the relevant network, or with the availability of the relevant facilities;
- rules in relation to those matters about the recovery of costs and cost orientation;
- rules for those purposes about the use of cost accounting systems; and
- obligations to adjust charges in accordance with directions given by Ofcom.

5.39 Section 88 of the Act states that we may only set an SMP condition falling within section 87(9) where it appears from the market analysis that there is a relevant risk of adverse effects arising from price distortion. The condition should also be appropriate for the purposes of promoting efficiency, promoting sustainable competition, and conferring the greatest possible benefits on the end-users of the public electronic communications services. Section 88 also requires that we must take account of the extent of the

⁷⁵ Ofcom, 2017. *Enforcement guidelines for regulatory investigations*.
https://www.ofcom.org.uk/data/assets/pdf_file/0015/102516/Enforcement-guidelines-for-regulatory-investigations.pdf.

investment in the matters to which the condition relates of the person to whom the condition is to apply.

- 5.40 We consider that the proposed SMP conditions would satisfy the tests set out in section 88 of the Act. Our reasoning is set out in detail in the relevant parts of this consultation relating to the different proposed charge controls. The points set out below should be read in conjunction with the more detailed analysis in those sections.
- 5.41 We consider that, in the absence of appropriate *ex ante* regulation, there is a relevant risk of adverse effects arising from BT fixing and maintaining some or all of its charges for the services we propose to include in the controls at an excessively high level.

Promoting efficiency

- 5.42 We consider that each of the proposed charge controls is appropriate to promote efficiency. In setting the proposed controls, we encourage BT to achieve greater efficiency by allowing it to keep any profits that it earns from reducing costs over and above the efficiency gains we have assumed in setting the proposed control.
- 5.43 We consider that each of our proposed charge controls would also promote efficiency by, *inter alia*:
- ensuring BT cannot price excessively;
 - allowing BT to earn a reasonable rate of return (the cost of capital) if it is efficient;
 - providing BT with flexibility to change prices to meet demand conditions by recovering common costs in the most efficient manner across the proposed groups of services (subject to any relevant sub-caps); and
 - supporting incentives to invest for BT and others by providing pricing stability in a period of transition to a new regulatory approach.

Promoting sustainable competition and conferring the greatest benefit on end-users

- 5.44 We also consider that each of the proposed charge controls would be appropriate to promote sustainable competition and to confer the greatest possible benefits on end-users of public electronic communications services.
- 5.45 In particular, each proposed charge control would prevent excessive pricing and would promote sustainable retail competition and network investment, which we consider is likely to confer the greatest benefits on end-users of public electronic communications services. We have identified the appropriate services to be subject to controls in Volume 1. The proposed controls would aim to provide pricing stability within a relatively short review period bridging the transition to the introduction of new, long-term downstream regulation for business and residential markets. This in turn would aim to preserve incentives for BT and other providers to invest.
- 5.46 The efficiency gains that we refer to above should, in the longer term, be passed onto consumers through reductions in prices and improvements in quality of service, either due to competition or subsequent charge controls.

- 5.47 Some of our proposed charge controls apply to baskets, so we have proposed appropriate safeguards to ensure that BT does not use the pricing flexibility offered to it in a way that would harm competition.

Consideration of investment

- 5.48 In proposing the charge controls we have also taken into account the need to ensure other providers, as well as BT, have the incentives to invest and innovate where it is efficient to do so. Our consideration of investment has included the following:
- in deciding on our overall approach to charge controls, we have placed weight on the benefits of pricing stability and regulatory certainty in a period of transition to a new regulatory regime and have sought to account for the scope of new investment;
 - to inform the level at which to cap prices, we have modelled BT's costs. In doing so we have included BT's efficiently incurred costs and built in a reasonable return on investment; and
 - in designing the charge controls we have sought to encourage and reward productive efficiency.
- 5.49 Therefore, we consider that each of the proposed charge controls appropriately balances ensuring BT's charges are not excessive with allowing appropriate incentives for BT and others to invest and innovate.

Fulfilment of section 47 tests

- 5.50 Any SMP condition must also satisfy the tests set out in section 47 of the Act, namely it must be:
- objectively justifiable in relation to the networks, services or facilities to which it relates;
 - not such as to discriminate unduly against particular persons or a particular description of persons;
 - proportionate as to what it is intended to achieve; and
 - transparent in relation to what it is intended to achieve.
- 5.51 We consider that the proposed SMP conditions would satisfy the tests set out in section 47 of the Act. As in relation to sections 87 and 88, the points set out below should be read in conjunction with the more detailed analysis in other sections of this consultation.

Objective justification

- 5.52 Given the proposed SMP findings, in the absence of a charge control BT could set excessive charges, having an adverse impact on both the ability of companies to compete in the downstream provision of services and on consumer choice and value for money. Our proposed charge controls have been designed to address this risk while allowing BT the ability to recover its costs, including a reasonable return on investment.
- 5.53 As a result of our analysis set out in this consultation, we consider the proposed SMP condition would be objectively justifiable.

Absence of undue discrimination

- 5.54 We are satisfied that each of the proposed charge controls would not discriminate unduly against particular persons or a particular category of persons, because any telecoms provider (including BT itself) will be able access the services at the charge levels set by the proposed controls.
- 5.55 We consider that the proposed charge controls do not discriminate unduly against BT as the controls seek to address BT’s market position, including its incentive and ability to set excessive charges for services falling within the scope of the proposed controls.

Proportionality

- 5.56 We are satisfied that the proposed charge controls are proportionate because they would apply to an appropriate set of charges within those markets where we propose BT has SMP. The proposed controls are focused on ensuring that there are reasonable charges for those services.
- 5.57 The charge controls allow for BT to make a reasonable return on investment and provide both BT and others with incentives to invest and develop their networks. One of our aims is to provide price stability over the course of the relatively short review period, as keeping prices flat in nominal terms minimises disruption and change. This should be conducive to supporting a stable investment environment for BT and others.
- 5.58 We therefore consider that each of the proposed charge controls are proportionate in that they do not impose controls that go beyond what is required to achieve the aim of addressing BT’s ability and incentive to charge excessively for services covered.

Transparency

- 5.59 We consider that each of the proposed charge controls is transparent in relation to what it is intended to achieve. The aims and effect of each of the proposed controls are set out in this consultation. The proposed text of the SMP conditions has been published with this consultation. We have also set out the likely impact of the proposed controls on charges for the duration of the control.

Consistency with statutory duties

- 5.60 We consider that each of the proposed charge controls is consistent with our duties under sections 3 and 4 of the Act for the reasons set out in this section, and in this consultation as a whole.
- 5.61 In particular, the charge controls will, in conjunction with the other SMP conditions, further the interests of citizens and of consumers in relevant markets by the promotion of competition in line with section 3 of the Act. Each control seeks to ensure the availability of electronic communications services, priced at an appropriate level, throughout the UK. We have had regard to the desirability of promoting competition and encouraging investment

and innovation in relevant markets, as well as the availability and use of high-speed data transfer services throughout the UK.

- 5.62 We have taken into account further objectives, including ensuring that services are available at charges that are reasonably related to the efficient costs of supply (preferably as a result of effective competition), and investment and innovation (namely, the objective of promoting efficient investment in the development of new and innovative services by BT and other telecoms providers).
- 5.63 In line with section 4 of the Act, we consider that each of the proposed charge controls will, in particular, promote competition in relation to the provision of electronic communications networks and will encourage the provision of network access for the purpose of securing efficiency and sustainable competition in markets for electronic communications networks and services.
- 5.64 Finally, in performing our duty to further the interests of consumers, we have also had regard to their interests in respect of choice, price, quality of service and value for money.

Leased Lines Pricing Recommendation and BEREC Common Position

- 5.65 The Leased Lines Pricing Recommendation relates to charging aspects of wholesale leased lines part circuits.⁷⁶ It includes recommended ceilings for leased line part circuits to “inform and guide a national regulatory authority (NRA) as to how to apply the best current practices in leased lines provision when devising regulatory remedies for leased line markets that are not effectively competitive in their territory” (page 6 of the Explanatory Memorandum).
- 5.66 While we have taken utmost account of the Leased Lines Pricing Recommendation, the ceilings are based on prices for leased lines part circuits from Member States in June 2004. Both prices and costs have since changed such that use of the ceilings could result in charges diverging from the efficient cost of provision.
- 5.67 We consider that the RFS data (as we have adjusted it where appropriate) is more directly relevant in controlling charges in the forthcoming period. By using up-to-date cost accounting data from BT’s RFS and other relevant inputs and assumptions, we consider that we have ensured that charge levels are efficient and consistent with the principles set out in the Leased Lines Pricing Recommendation.
- 5.68 In formulating our proposed charge controls discussed above, we have also taken utmost account of the BEREC Common Position on best practice in SMP remedies including BP30, BP31 and BP32 which appear to us to be particularly relevant in this context.⁷⁷ BP30 states

⁷⁶ Commission Recommendation of 29 March 2005 on the provision of leased lines in the European Union – Part 2 – pricing aspects of wholesale leased lines part circuits (C(2005) 951) and the accompanying Explanatory Memorandum (the Leased Lines Pricing Recommendation). <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32005H0268&from=EN>.

⁷⁷ BEREC, 2012. Revised BEREC Common Position on best practices in remedies as a consequence of a SMP position in the relevant markets for wholesale leased lines, BoR (12) 126. https://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/1096-revised-berec-common-position-on-best-pr_0.pdf.

national regulatory authorities should provide a reasonable degree of price certainty; BP31 that they should incentivise efficient investment and sustainable competition; and BP32 that, where appropriate, they should require SMP operators to provide regulated products based on an explicit pricing obligation. We consider that our proposals are consistent with the best practice set out in the BEREC Common Position.

Consultation question

Question 5.1: Do you agree with each of our proposals in relation to the implementation of charge controls? Please provide evidence to support your views.