

Annex A

Report by BT - Guidance on Dark Fibre pricing

Calculating the LRIC differential

1. Ofcom’s proposed dark fibre pricing is based on the active service minus the LRIC cost differential to active services.
2. Ofcom is proposing that the active LRIC be based on available cost information. In practice that will mean using prior year costs, from the RFS. For example, the active LRIC for the year 2016/17 will be based on the financial year to 31 March 2015.
3. This in itself, would be an issue in practice, as the RFS for the financial year to 31 March 2015 is published on 31 July 2015. It would not be possible to notify new prices that use published data from the RFS 15/16 before 1 September 2015, with new prices taking effect 28 days later.
4. In its calculation, Ofcom has reviewed the supercomponents contained within the FAC of rentals and connections and determined which costs would be included in the active LRIC.
5. Ofcom’s approach to calculating the active LRIC for rental services is outlined in Table 1.

Table 1: Calculating the active LRIC for rental services

Supercomponent	% of FAC included in active LRIC	Comments
Wholesale & LAN extension services fibre	0%	
Ethernet Electronics	93%	Based on supercomponent LRIC:FAC ratio
Sales product management	42%-47%	Based on ratio of active LRIC to relevant FAC
Revenue Debtors	42%-47%	Based on ratio of active LRIC to relevant FAC
Access Cards (other services)	Not included in FAC	Is excluded from FAC
Service Centres - Assurance	25%	Based on a 25% reduction in fault volumes

Source: Ofcom, 2015 LLCC Consultation

Fibre costs

6. These are not included in the active LRIC. We consider that this is correct. Although as we discuss later, the cumulative impact falls on the fibre component.

Ethernet Electronics

7. These are included in the active LRIC. The percentage that is included is based on the supercomponent LRIC:FAC ratio from the LRIC model. In 2013/14, this was 93%. This is likely to vary on a year by year basis, but is likely to be high as the main costs in the component (hardware) would be expected to have a low level of fixed costs.

8. Ofcom's active LRIC calculation is based on the FAC reported in the RFS. However, in its calculation of FAC for the purpose of the Charge control, Ofcom excludes around 5% of the costs of Ethernet Electronics in the RFS to reflect BT's changes in how it historically recovered the upfront costs of the electronics.¹ The active LRIC calculation should reflect this reduction in the FAC which would reduce the active LRIC by around 3%.

Sales Product Management (SPM)

9. The sales & product management FAC varies between £19 and £40 per circuit. There is a near linear relation between the FAC of SPM and the FAC of the rest of the components for each service. This suggests that SPM costs are allocated proportionately to previously allocated costs, rather than in relation to any specific cost driver. A dark fibre service would have a lower FAC than the active service (because it would have no electronics), thus leading to a lower SPM cost allocation.
10. Ofcom's approach to calculating the active LRIC for SPM is unclear.
11. Ofcom takes the SPM FAC for each service (e.g. £22.31 for LA non-WECLA). It then "allocates[s] share to active service using share of active incremental costs relative to EAD cost stack".
12. It is not entirely clear what this means. Ofcom claims the calculation is based on: "the proportion of the overall EAD cost stack which related to the active LRIC"². There are two interpretations of this:
- Approach one: Take all supercomponents other than SPM and revenue debtors and take the FAC. Then calculate the active LRIC of all supercomponents other than SPM/revenue debtors. Dividing the second number (LRIC) by the first number (FAC) gives the active LRIC:FAC ratio to be used. This would be around 3% for standard services, and 3% for LA services.
 - Approach two: Take the FAC of each service. Then calculate the active LRIC of all supercomponents other than SPM/revenue debtors. Dividing the second number (LRIC) by the first number (FAC) gives the active LRIC:FAC ratio to be used. This would be around 3% for standard services, and 3% for LA services.
13. Both approaches lead to counterintuitive results for two reasons.
14. Firstly, the total LRIC:FAC ratio for active LA services is higher than active standard services. This is because the LA services use less fibre (and hence have a lower FAC), but the LRICs for the active LA and standard services are fairly similar. On this basis the active LRIC of SPM is lower for standard services than LA services, despite the FAC of SPM being higher. It would not seem 'reasonable' to charge differential prices for standard and LA active services based on an assumption that they would have different SPM costs.

¹ 2015 LLCC, paragraph A7.48-A7.52

² 2015 LLCC, paragraph 8.51

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15. Secondly, it is not clear that Ofcom's assumption that any significant portion of costs is related to sourcing equipment. The two largest cost categories in the component consist of "Plant Support, Core Transmission Equipment" and "Transfer Charges, Plant Support". It is not clear that these cost categories would be reduced substantially if BT supplied dark fibre instead of an active service. If there is any reduction in costs related to not sourcing equipment it is unlikely to be related to the relationship between the active LRIC and FAC of the other components. We would therefore suggest that there should not be a reduction in SPM costs due to avoided equipment costs.
16. This proposal would reduce the active LRIC differential by around 3%.

Revenue Debtors

17. Ofcom takes the same approach with revenue debtors as it does with SPM, leading to the same issues. In practice, revenue debtors is almost entirely related to the price. The ratio of revenue debtor cost to price is around 3%. Ofcom should therefore take 3% of the active LRIC differential (excluding revenue debtors) to calculate the active LRIC differential of revenue debtors.
18. This would reduce the active LRIC by around 3%.

Service Centres – Assurance

19. Ofcom has assumed that 25% of faults would be avoided if BT supplied a dark fibre circuit instead of an EAD 1Gbit/s service. Ofcom bases this on data from BT that showed that 21-22% of faults were equipment related.³ Ofcom also notes that around 50% of all faults were marked as "fault not found" or "right when tested", and that this data therefore provides little information on the reduction in faults that might be expected if BT provided dark fibre instead of active circuits.
20. We would make a number of points:
- It is unclear why Ofcom has increased the % of faults avoided from 21-22% up to 25%.
 - On a dark fibre circuit, it is the dark fibre purchaser who will monitor for faults. Any equipment related faults should be picked up by the dark fibre purchaser and then rectified. However, there are likely to be cases where the dark fibre purchaser cannot identify a fault on their equipment, and so passes the fault issue back to Openreach although the ultimate fault lies with the dark fibre purchaser. Even if 21% of all faults relate to equipment, it is unclear that this would lead to a 21% reduction in the volume of work for the assurance centre, because Openreach would incur costs relating to handling equipment related to faults incorrectly reported to it.
 - The LRIC:FAC ratio of the assurance centre cost category is 3%. Therefore a reduction in fault volumes of 21% would not lead to a 21% reduction in costs, but around an 3% reduction in costs.

³ 2015 LLCC, paragraph 8.47

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21. Ofcom should:
- Take only \times of the FAC of the assurance costs. This would reduce the active LRIC by around \times .
 - Reflect in its assumptions the fact that BT's assurance centres will have to deal with incorrectly reported equipment faults.

Cumulo

22. Ofcom has proposed that because dark fibre would be "lit" by the purchaser, that BT would save cumulo rates on the dark fibre.
23. The total cumulo allocated due the WES fibre supercomponent in the AI market was around \times (based on the new 2014/15 allocation methodology). This is around \times of the total WES fibre that relates to AI services. Around \times of capital of the WES fibre supercomponent related to fibre (the rest is mostly duct). We therefore take \times costs out of the WES fibre supercomponent.
24. This calculation is based on high level data, further data is being supplied to us, and we may revise this allocation.
25. We have assumed that there is no cumulo effect on any other supercomponent.
26. There is also likely to be a small effect on main link because there will be less "lit" fibre in the main link. This effect is likely to be less than \times per km.

BT estimate of active LRIC differential in 13/14

27. Table 2 outlines our estimate of the active LRIC and FAC of rental services using Ofcom's proposed methodology, based on the 2013/14 RFS and LRIC model. We have excluded Access Cards, because Ofcom will not include these costs in the cost stack and we will no longer include them in the cost stack from 2014/15 onwards.

Table 2: Estimation of the active LRIC and FAC for EAD 1Gbit/s services based on Ofcom methodology

Supercomponent	Local Access		Standard	
	FAC	Active LRIC	FAC	Active LRIC
Wholesale & LAN extension services fibre etc	£856.86	\times	£2,272.76	\times
Ethernet Electronics	£902.67	\times	£902.67	\times
Sales product management	£22.31	\times	£34.37	\times
Service Centres - Assurance	£63.83	\times	£63.83	\times
Revenue Debtors	£24.45	\times	£37.69	\times
Total	£1,870.12	\times	£3,311.32	\times

Source: BT RFS, LRIC Model and own analysis

28. Table 3 sets out our estimate of the active LRIC and FAC for EAD 1Gbit/s services based on Ofcom's methodology but revised as per the above analysis.

Table 3: Estimate of the active LRIC and FAC for EAD 1Gb/s services using the revised methodology

Supercomponent	Local Access		Standard	
	FAC	Active LRIC	FAC	Active LRIC
Wholesale & LAN extension services fibre etc	£856.86	✗	£2,272.76	✗
Ethernet Electronics	£902.67	✗	£902.67	✗
Sales product management	£19.29	✗	£34.37	✗
Service Centres - Assurance	£63.83	✗	£63.83	✗
Revenue Debtors	£21.15	✗	£37.69	✗
Total	£1,863.80	✗	£3,311.32	✗

29. Table 4 compares our estimates of the active LRIC using Ofcom's methodology and our revised methodology based on Ofcom's approach.

Table 4: Comparison of the LRIC differential between Ofcom's approach and the revised methodology

Supercomponent	Local Access		Standard	
	Ofcom	Revised approach	Ofcom	Revised approach
Wholesale & LAN extension services fibre etc	£15.00	✗	£39.77	✗
Ethernet Electronics	£839.48	✗	£839.48	✗
Sales product management	£10.47	✗	£9.08	✗
Service Centres - Assurance	£15.96	✗	£15.96	✗
Revenue Debtors	£11.47	✗	£9.95	✗
Total	£892.76	✗	£915.13	✗

30. We consider that Ofcom's approach to calculating the active LRIC differential is flawed, and that the alternative approach is preferable:

- On 2013/14 data using Ofcom’s approach, the active LRIC differential is £3 higher for Local Access than Standard variants. This is because of the flawed methodology for SPM and for Revenue Debtors.
- On 2013/14 data, based on the revised approach the active LRIC for both Local Access and Standard variants is around £20 lower than under Ofcom’s approach. The SPM LRIC is very low (as SPM costs are almost entirely fixed), and the revenue debtors LRIC is much lower.

Forecasting the LRIC differential to 2018/19

31. In order to forecast the active LRIC to 2018/19, we have taken our 2013/14 estimates using Ofcom’s methodology and our proposed methodology and applied Ofcom’s forecast efficiency estimates from 2013/14 to 2018/19. We have applied Ofcom’s efficiency assumption to opex of 4.5% in 2014/15 and 2015/16 (as per the 2015 BCMR) and 5% in 2016/17 to 2018/19 (as per Ofcom’s current proposal). We have only applied this to opex costs.

Table 5: Estimate of LRIC differential 2013/14, based on Ofcom’s methodology

Year	DF Local Access	DF Standard
2013/14	£893	£913
2014/15	£858	£878
2015/16	£825	£844
2016/17	£790	£807
2017/18	£756	£773
2018/19	£723	£739
OFCOM 2018/19	£753	£790

Table 6: Estimate of active LRIC differential – Using revised approach

Year	DF Local Access	DF Standard
2013/14	∞	∞
2014/15	∞	∞
2015/16	∞	∞
2016/17	∞	∞
2017/18	∞	∞
2018/19	∞	∞
OFCOM 2018/19	£753	£790

32. Using the Ofcom approach, we estimate that the active LRIC differential will fall to around ∞ per circuit, whereas Ofcom’s initial estimate is around £750-£790 per circuit. Given that we have only applied a crude estimate to the efficiency calculation, we consider that our estimate is likely to be reasonable.
33. Using our revised methodology, the active LRIC differential falls to around ∞.