



SPC Network

Report for nexfibre

**The Economic Effects of Openreach's FTTP Offers 1st June
2026**

Non-Confidential Version

August 2026



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About SPC Network

SPC Network was founded in 2003 and has worked for over 55 clients worldwide. We undertake Strategic Policy Development in platform and networked industries, by combining the knowledge of our consultants with specific and valuable skills to ensure rigorous analysis and exceptional advice. Our core consultancy team and network of partners have substantial experience in industry and consulting meaning that we understand the practical issues and challenges facing the market. Through advanced academic training, we have developed the key skills and rigorous approach needed to support our clients in the policy debate.

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TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	PREDATION.....	2
2.1	COMPETITIVE WHOLESALE FTTP: PRICE ELASTICITY OF DEMAND	2
2.2	IMPACT OF DISCOUNTS ON TAKE-UP	3
2.3	COMPETITIVE CONSEQUENCES OF THE DISCOUNTS.....	4
3	THE LOCATION OF THE MIDPOINT	6
3.1	THE 2026 FIBRE COST MODEL (FCM)	6
3.2	THE BASIS BEHIND THE REO COST RANGE.....	7
3.3	THE LARGE SCALE SCENARIO.....	10
3.4	IMPLICATIONS OF OFCOM’S CURRENT APPROACH WITH REGARDS TO A MID-POINT PRICE	13
4	MARGIN SQUEEZE.....	16
4.1	INTRODUCTION.....	16
4.2	OFCOM’S MARGIN SQUEEZE ANALYSIS	16
4.3	CORRECTED MARGIN SQUEEZE ANALYSIS – INCREMENTAL NTO OFFER.....	19
4.4	CORRECTED MARGIN SQUEEZE ANALYSIS – GEOGRAPHIC NTO OFFER.....	21
4.5	IMPLICATIONS OF THE PRICE SQUEEZE TEST RESULT	23
5	OTHER MATTERS.....	25
5.1	THE CONTINUING NEED FOR CAPEX FUNDING BY ALTNETS.....	25
5.2	IMPACT OF ACHIEVABLE TAKE-UP ON THE REQUIRED RENTAL CHARGE.....	26
5.3	IMPLICATIONS OF A CONSTANT (IN REAL TERMS) RENTAL CHARGE FROM THE FCM VERSUS “REAL LIFE” REVENUE GENERATION.....	27



1 INTRODUCTION

1. On June 1st 2026 Openreach notified Ofcom of a package of commercial offers comprising the Frontbook ARPU share offer, the Incremental New to Openreach (NTO) Offer and the Incremental Geographic NTO Offer (collectively the “FTTP Offer”). Ofcom issued a consultation document on these offers on 28th July 2026.
2. nexfibre has asked SPC Network, a policy and economics consultancy specialising in platform and network industries, to provide an economic assessment of these offers to inform its response to the consultation document. This report sets out our analysis of the Openreach offers.
3. We have organised our analysis around four themes:
 - I. Predation
 - II. The location of the “midpoint”
 - III. Margin Squeeze
 - IV. Other matters.
4. Our primary concern with Ofcom’s conclusions in its consultation document¹ is that Ofcom has used a “midpoint” Reasonably Efficient Operator” (REO) cost calculated as the average of the Targeted scenario of an altnet reaching 5 million premises and the Large Scale scenario of an altnet reaching 20 million premises. This results in a midpoint REO cost of £17.40, which equates to the average cost per line of just 3.5 million premises passed. This implies that Ofcom is content to see a REO cost that restricts competition to just 3.5 million premises in Area 2.
5. Using this same REO cost means that all elements of the FTTP Offer would result in a margin squeeze that could not be sustained by altnets.
6. Therefore, based on our assessment of Ofcom’s calculations, competition from altnets would be seriously impaired by these offers and Ofcom’s objective of creating sustainable competitive markets could not be achieved.
7. We are grateful to nexfibre for their input to this report, but SPC Network is responsible for the content of this report.

¹ Ofcom “Openreach proposed commercial offers: FTTP and Ethernet offers – notified 1 June 2026” 28th July 2026



2 PREDATION

8. Predatory pricing is the setting of a price below cost to deter the entry or expansion of a competitor, with the expectation of later raising the price to recoup any losses.
9. Openreach's proposed discounts targeting NTO customers do this in an "automated" way:
 - I. The Openreach NTO discounted price is reduced below the REO's cost as shown below in Section 4 "Margin Squeeze". As described by Ofcom, all altnet wholesale lines sold in their own coverage areas that switch to Openreach are likely to be above the base line and so attract discounts.²
 - II. Competitors would experience reduced take-up in their existing coverage areas as a result of these Openreach discounts, so encouraging Communications Providers (CPs) using altnets to switch to Openreach.
 - III. With lower take-up, competitors will be more cautious in further expansion to new areas. As Ofcom says in the TAR: *"For altnets, take-up underpins their ability to exert a strong competitive constraint in the long term."*³
 - IV. With lower altnet take-up (or no altnet presence in areas no longer considered for build), by design of the discounts, Openreach's average ARPU across its customer base would rise (as fewer discounts are given). However, the pricing pressure on altnets competing against the discounted prices offered to "incremental" NTO customers would remain, thus cementing Openreach's market position.
10. In the remainder of this section, we present a quantified model to illustrate the impact that this process would have on the competition in the wholesale FTTP market. To do this we need to make assumptions about the competitive wholesale price elasticity of FTTP lines.

2.1 Competitive wholesale FTTP: Price elasticity of demand

11. In the absence of any direct econometric evidence, we calculate a wholesale price elasticity for FTTP lines from the "Lerner Index". This states, that if a firm with a degree of market power (e.g. a monopolist or an oligopolist) maximises profits, it will choose its price so that:

$$-\frac{1}{e} = \frac{\text{Price} - \text{Marginal Cost}}{\text{Price}}$$

12. where e is the competitive price elasticity (i.e. the price elasticity experienced by the firm, as opposed to the market price elasticity). Therefore, given knowledge of the price and marginal cost, the competitive price elasticity can be estimated by:

² As in Consultation Document, Figure 4.3.

³ TAR, Volume 1, paragraph 1.9.



$$e = - \frac{Price}{Price - Marginal\ Cost}$$

13. We populate this formula using revenue and cost data for Area 2 “FTTP Other Rentals” from BT’s Regulatory Financial Statements (“RFS”).⁴ From this report, we find Area 2 FTTP revenues (internal and external) for 2025/6 to be £1,061.1 million. The total cost allocated to FTTP is composed of an opex of £607.1 million and a cost of capital of £272.9 million⁵, making a total of £880.0 million.
14. The Lerner Index formula requires marginal cost. It can be argued that Openreach’s long run marginal cost for FTTP, as it gains customers by expanding into new areas, is equal to or greater than its average cost, depending on the extent to which it initially targets lower cost areas. If we assume that marginal cost equals average cost we compute a competitive price elasticity for Openreach of -5.9. At first sight this may seem high, but gains plausibility when one considers that ISP/CPs will be extremely price sensitive in their purchasing decisions and react to any change in differential pricing between Openreach and altnets.
15. An alternative interpretation of marginal cost is the marginal cost of increased take-up within an existing coverage area. We investigated this by using a version of the public FCM adjusted to more closely model Openreach in Area 2 – covering the whole of Area 2 with a 40% take-up rate and a WACC of 7.9%.⁶ We then flexed the take-up rate by 5% increments from 40% to 60% (the range over which Openreach may seek to raise take-up through the new discount offers). Over this range we estimated that marginal cost was 44% of average cost. Applying this ratio to total cost gives an estimated price elasticity of -1.6. We use this estimate in the modelling below but note that it can be argued as a conservative estimate when compared to the assumption of a marginal cost from an expanding coverage area.

2.2 Impact of discounts on take-up

16. Using a competitive price elasticity of -1.6, we now estimate the impact of Openreach’s proposed discounts on take-up experienced by Openreach and a REO.
17. Our analysis models the situation where Openreach has a 40% market share and is in competition with two altnets each having a 30% market share. VMO2 is not active in the model. This is an example of a situation that could occur in what Ofcom names as the Area 1 geographic market in the TAR.
18. Our calculation in Section 4 Table 5 shows that the combined Box Swap and NTO discount would reduce Openreach’s ARPU ceiling from £19.32 to £14.01 – a reduction of 27%. Using the price elasticity of -1.6 will increase Openreach’s take-up demand from 40% to 66%,

⁴ RFS, Table 7.1.1.

⁵ This is the product of mean capital employed (“MCE”) of £3,454.9 million and a pre-tax FTTP access line WACC of 7.5% (from TAR, Table A16.7, noting that FTTP lines are included in OUKT).

⁶ See TAR, Table A16.7



ceteris paribus.⁷ Openreach's gain of 26 percentage points of take-up will come at the expense of competing altnets. Assuming two competing altnets initially with 30% take-up each, and with neither able to respond with equivalent offers, their take-ups will fall by 13 percentage points each to only 17% - a level that is unlikely to incentivise further coverage investment.

19. Table 1 below gives results for all discount offers for three different scenarios.

Table 1: Effect of Offers on Take-Up by a REO

	Openreach	REO
Take-up: ARPU Share & Box Swap & Incremental NTO Offer		
Pre-discount	40%	30%
Post-discount	66%	17%
Take-up: ARPU Share & Box Swap & Geographic NTO Offer		
Pre-discount	40%	30%
Post-discount	44%	28%
Take-up: ARPU Share & Box Swap, Incremental NTO & Geographic Offer		
Pre-discount	40%	30%
Post-discount	75%	13%

Source: SPC Network analysis

2.3 Competitive consequences of the discounts

20. Competitors would experience reduced take-up in their existing coverage areas as shown in Table 1 above. With lower take-up, competitors will be more cautious of making further expansion to new areas. As Ofcom says in the TAR: *"For altnets, take-up underpins their ability to exert a strong competitive constraint in the long term."*⁸
21. With lower altnet take-up (or no altnet presence in areas no longer considered for build), by design of the discounts, Openreach's average ARPU across its customer base would rise (as fewer discounts are given). However, the pricing pressure on altnets competing against the discounted prices offered to "incremental" NTO customers would remain, thus cementing Openreach's market position.
22. In the case of the Geographic NTO Offer discounts, to the extent that nexfibre areas are targeted, the predatory impact will be broadly the same, with reduced take-up and restrained nexfibre build in new areas.

⁷ $(1-27\%)^{1.4}-1 = 66\%$.

⁸ TAR, Volume 1, paragraph 1.9.



23. This is precisely the outcome foreshadowed by Ofcom in the TAR:⁹

“In the WFTMR21, we explained that geographic discounts might reduce Openreach’s returns in certain areas. However, we were concerned that such a strategy may benefit Openreach in the longer term if its actions deter new network build, reduce competition and afford it a higher market share and the ability to charge higher prices over the longer term.”

⁹ TAR, Volume 3, paragraph 9.25.



3 THE LOCATION OF THE MIDPOINT

24. Our primary concern with the Commercial FTTP Offers relates to how Ofcom has derived the midpoint of the REO cost range. These are set out below.
25. Paragraph 3.29 of the Consultation Document contains Ofcom's reasons for not considering that the proposed ARPU cap raises concerns about compliance with the fair and reasonable obligation. The three bullet points are repeated below (redaction in original):
 - *"The effective £19.32 discounted price for bandwidths above 330Mbit/s sits above the mid-point of our adjusted REO cost range. Therefore, if all customers received this price it would not raise concerns.*
 - *Based on the above, we estimate an average FTTP rental charge, inclusive of the Frontbook ARPU share offer discount, of [REDACTED]. Again, this sits above the mid-point of our adjusted REO cost range.*
 - *Our understanding is that Openreach's offer is aiming to encourage customers to move from lower priced lower bandwidths to higher price/bandwidth products so it is unlikely to put downward pressure on average FTTP prices overall."*
26. The first two of the three points above make specific reference to the mid-point of the adjusted REO cost range stating that if prices sit above that mid-point then they do not raise concerns. In effect, this means that Ofcom is indeed using the mid-point of the adjusted REO cost range as a *bright line* test. As such, the method used by Ofcom to arrive at that mid-point, together with the implications of assumptions made, becomes of paramount importance when considering whether a stakeholder might agree or disagree with Ofcom's assessment of the Frontbook ARPU share offer and the Box-Swap offer.

3.1 The 2026 Fibre Cost Model (FCM)

27. The mid-point test being used by Ofcom is based on a simple average of the rental charge output of two specific scenarios that Ofcom has run on the 2026 version of the Fibre Cost Model (FCM).
28. A model is, of course, only ever an approximation of reality, but as Ofcom said in Annex 11 of the TAR, paragraph A11.99:

*"... to ensure our modelling continues to inform our assessment of our overall approach against our objectives, including the impact on competitive network investment, we need to check that **our approach** reflects the latest market developments, and ultimately, **is grounded in reality.**"* [our emphasis]
29. We therefore assume that the underlying messages resulting from Ofcom's provisional assessments take account of the assessed REO cost range(s) and help stakeholders to make an informed view on the likely implications of those Ofcom assessments.



3.2 The basis behind the REO cost range

30. The REO cost range is based on two distinctly separate scenarios that were run on the FCM - labelled as **Large Scale** and **Targeted**. The key differences between these scenarios, and necessary rental charge (as stated in the TAR, and in constant real terms), are:
 - Large Scale: 20 million premises passed, 30% take-up achieved, 10.3% WACC. This leads to a required constant, real terms rental charge of £21.21 (in 2026/27 prices).
 - Targeted: 5 million premises passed, 40% take-up achieved, 9% WACC. This leads to a required constant, real terms rental charge of £13.59 (again, in 2026/27 prices).
31. These two scenarios have then been used by Ofcom to guide its opinion of the lower and upper bounds for the steady (in real terms) rental price that would need to be charged by a REO for a sustained and competitive wholesale local access service. The basis behind the Large Scale scenario took account of feedback gathered from stakeholders during the TAR consultation period.
32. The two scenarios are basically modelling two very different market situations:
 - A collective of altnets that have, in aggregate, specifically targeted a lower cost subset of Area 2, totalling 5 million premises passed.
 - A collective of altnets that have, in aggregate, targeted a high proportion of Area 2, totalling 20 million premises passed (compared to the approximately 28 million across Area 2 as a whole).
33. Another way of viewing this is that if the WLA price that the altnets can realistically achieve over the medium to long term is around £13.59 (Targeted REO), and they are able to reach the necessary 40% take-up, then the competitive landscape will be restricted to only a small subset (5 million premises passed) of Area 2. For the remainder of Area 2, Openreach will continue to enjoy wholesale dominance with WLA.
34. On the other hand, if the WLA price that the altnets can realistically achieve over the medium to long term is around £21.21, and they are able to reach a more realistic 30% take-up, then the competitive landscape will be much broader and a much more sustainable 20 million premises passed.
35. This happens because, altnets will not be able to charge more than Openreach for a customer connection. We therefore assume that they will either not build beyond the number of premises that can be supported at the midpoint or will cease to provide in more expensive areas.

Implications of the Targeted scenario

36. The Targeted scenario appears very artificial since (a) it **excludes** large parts of the country from ever hoping to achieve a sustainable level of competition, and (b) even in that restricted market area the altnet would need to reach a take-up of 40% of premises



passed, which no altnet has achieved. This second point means, almost by definition, that there could never be three established competitive networks (since three times 40% is greater than 100%).

37. The degree of market exclusion from effective competition can be illustrated by looking at where the 5 million premises passed will lie. We have extracted the data from the FCM as the model selects which areas to roll out to by starting with the cheapest Access Node area first and then progressively working through the rankings until the required number of premises passed has been reached.
38. Tables 2 & 3 below summarise this by postcode sector area name. London postcode sector areas have been grouped together as one, "London", and those outside of London but broadly within the M25 have also been grouped together, but as "M25". The data has been sourced from the Network Cost Module, worksheet [Calc_Geo_Network], filtered so as to just consider postcode sectors with "Geographic_Area" marked as "2". The table in this worksheet is ranked so that the cheapest Access Node area is at the top (highest ranking), with all postcode sectors in that Access Node area sub-ranked.
39. By starting at the top of the list of post code sectors (thus W26, the cheapest sector), and aggregating the number of premises of the sectors, one can establish a set of post code sectors that together total a required number of premises passed. We have illustrated this in the diagram below, assuming that the required number was 50,000 premises.

CATEGORY					
Rank	Postcode_Sector	Infra_Geotype_ID	Geographic_Area	Premises	
1	W26	2	2	5,074	W26 through EC1V1 totals just over 50,000 premises
2	W25	1	2	6,082	
3	W92	2	2	6,035	
4	NW88	1	2	4,693	
5	W91	2	2	6,661	
6	W23	2	2	5,073	
7	W21	1	3	5,086	
8	W24	1	2	5,135	
9	NW89	2	2	4,477	
10	EC1V2	1	2	855	
11	EC1V1	1	3	1,540	
12	EC1V0	1	2	1,432	
13	WC1H8	2	2	1,336	
14	WC1X0	2	2	1,613	
15	WC1H9	2	2	2,209	
16	EC1V7	2	2	1,759	
17	EC1R3	2	2	412	

40. Once we had done that for the total numbers of premises we were interested in examining, we extracted the relevant rows into a separate Excel file. We have then summed these by postcode sector name (grouping those in London and within the M25 but outside of London as mentioned earlier). Clearly, a postcode area name, such as



Liverpool, covers more than just the main city but this summing provides a very useful summary of which parts of the country would be covered (and to what extent) by a restriction in the number of premises passed. We noted that there is also a column called Biz_Premises, but it is unclear whether these are included in the Premises number or are additional to it. We have assumed the former, but the impact would be very minor (less than 1%) if it is the latter.

41. The left-hand side of the first two tables, below, shows that London and the M25 represent 3.1 of the 5 million premises passed, with a further 1.4 million in other city-based post code areas where between 20% of 50% of premises are passed. The right-hand side shows where the remaining 0.5 million premises passed would be, with no city-based post code area achieving even 20% premises coverage.

Table 2: Market Exclusion Caused by the Targeted Scenario

Postcode Sector Area Names				Postcode Sector Area Names			
	Premises				Premises		
	Passed	Total			Passed	Total	
London	2,210,447	2,210,447	100%	Cardiff	67,652	479,473	14%
M25	907,410	1,827,514	50%	Belfast	64,798	787,212	8%
Subtotal	3,117,857	4,037,961	77%	Bristol	62,818	435,315	14%
Birmingham	261,620	810,884	32%	Nottingham	43,762	544,610	8%
Manchester	253,797	573,381	44%	Southampton	34,749	271,061	13%
Glasgow	215,437	570,595	38%	Plymouth	34,691	201,240	17%
Liverpool	154,781	413,061	37%	Coventry	33,447	349,189	10%
Portsmouth	113,027	376,122	30%	Leicester	31,809	424,703	7%
Edinburgh	111,127	417,771	27%	Bournemouth	30,406	243,731	12%
Brighton	89,631	302,253	30%	Newcastle upon Tyne	28,746	509,986	6%
Leeds	79,283	372,631	21%	Northampton	28,482	308,724	9%
Blackpool	56,559	120,305	47%	Reading	19,708	320,114	6%
Chester	60,296	285,411	21%	Wolverhampton	4,521	173,131	3%
Aberdeen	40,967	189,154	22%	Subtotal	485,589	5,048,489	10%
Subtotal	1,436,525	4,431,568	32%				

42. To emphasise the point, the FCM indicates that **all other post code areas would not be viable** for altnet rollout under the Targeted scenario. Table 3 list all those non-viable post code areas that have a premises count exceeding 100,000.

*Table 3: Non-Viable Postcodes*

Postcode Sector Area Names				Postcode Sector Area Names			
Premises				Premises			
	Passed	Total			Passed	Total	
Sheffield	-	630,298	0%	Ipswich	-	241,463	0%
Peterborough	-	393,521	0%	Blackburn	-	230,764	0%
Doncaster	-	332,340	0%	Bradford	-	229,031	0%
Derby	-	330,417	0%	Newport	-	227,591	0%
Norwich	-	307,466	0%	Milton Keynes	-	218,356	0%
Swansea	-	291,316	0%	Rochester	-	217,788	0%
Cleveland	-	289,279	0%	Canterbury	-	217,291	0%
Stoke-on-Trent	-	282,558	0%	Tunbridge Wells	-	212,479	0%
Warrington	-	281,086	0%	Preston	-	210,114	0%
Stockport	-	278,368	0%	Oldham	-	206,623	0%
Guildford	-	269,175	0%	Southend-on-Sea	-	201,944	0%
York	-	267,360	0%	Walsall	-	200,837	0%
Chelmsford	-	264,382	0%	Hemel Hempstead	-	191,073	0%
Oxford	-	263,984	0%	Dudley	-	189,783	0%
Gloucester	-	259,759	0%	Bolton	-	181,241	0%
Wakefield	-	243,335	0%	Exeter	-	178,568	0%

Postcode Sector Area Names				Postcode Sector Area Names			
Premises				Premises			
	Passed	Total			Passed	Total	
Swindon	-	176,845	0%	Paisley	-	133,404	0%
Bath	-	173,648	0%	Lancaster	-	121,893	0%
Redhill	-	172,984	0%	Falkirk	-	121,281	0%
Stevenage	-	172,647	0%	Carlisle	-	121,179	0%
Motherwell	-	172,510	0%	Huddersfield	-	120,512	0%
Llandudno	-	167,209	0%	Lincoln	-	117,420	0%
Darlington	-	164,608	0%	Sunderland	-	116,385	0%
Kilmarnock	-	163,109	0%	Crewe	-	105,018	0%
Slough	-	157,277	0%	St Albans	-	104,982	0%
Colchester	-	154,624	0%	Watford	-	104,756	0%
Kirkcaldy	-	153,965	0%	Torquay	-	104,080	0%
Durham	-	148,056	0%	Worcester	-	100,053	0%
Cambridge	-	146,691	0%				
Dundee	-	139,350	0%				
Wigan	-	137,618	0%				
Luton	-	137,146	0%				

43. Our conclusion from the above is that any reliance on the Targeted scenario implies that Ofcom is comfortable with only 5 million of the 28 million premises contained in Area 2 having any realistic scope of sustainable, established competition of fibre access networks, with less than two million of those being outside of the M25. This would be contrary to government and Ofcom policy.

3.3 The Large Scale scenario

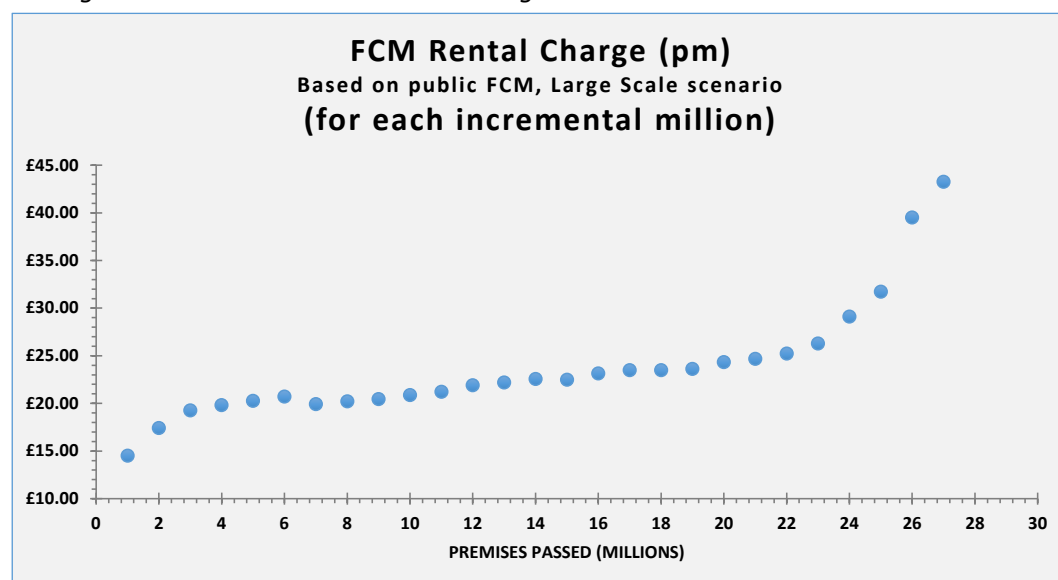
44. As mentioned earlier, the Large Scale scenario is reasonably representative of a collective of altnets that have, in aggregate, targeted a high proportion of Area 2, totalling 20 million premises passed (compared to the approximately 28 million in Area 2 as a whole). One real-life difference between the scenario and an actual collective of altnets would be that the latter would also comprise at least a degree of overbuild. Indeed, the existence of such overbuild was recognised by Ofcom during the TAR consultation process and



accounted for in the revised PIA cost model. However, as the Large Scale scenario assumes a much more realistic 30% take-up, having two altnets in the same area, in addition to Openreach itself, is potentially viable and consistent with Ofcom's definition of Area 1 in the TAR.

45. Ofcom does not claim that the figure of 20 million premises passed is robust but rather concludes that it is a reasonable target to aim for, taking account of the Large Scale scenario assumptions. Ofcom's reasoning was, we deduce, influenced by Figure A11.2 from Annex 11 of the TAR, which analysed how the required rental charge varied with each incremental million premises passed. We have done our own analysis of this using the public version of the FCM, with the result shown in Figure 1 below.

Figure 1: Incremental FCM Rental Charge

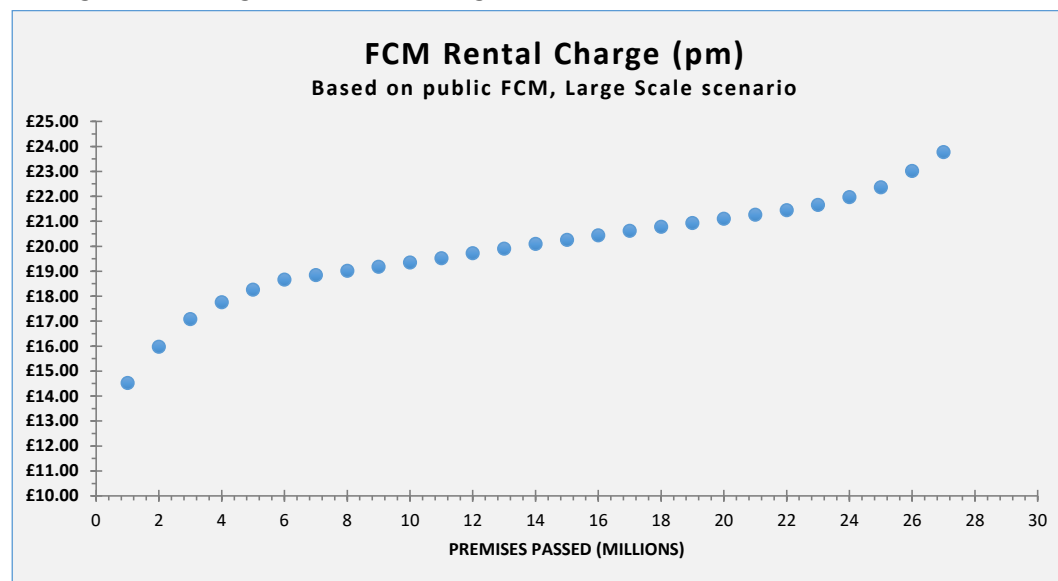


46. The numbers used in this and the other graphs below have been sourced from the Large Scale scenario with the public version of the FCM. Specifically, we pro-rata the relevant roll-out numbers of premises for Area 2 in worksheet [Deployment scenarios] of the Volumes Module of the FCM to establish the constant (real terms) monthly Rental Charge for all premises passed.
47. For the incremental graph, we then calculated the Rental Charge for each incremental million premises passed by comparing the total (per active line * # of active lines) for the increment of interest and the previous one (for example, to assess the Rental Charge for the 12th million premises we considered the totals for 11 million and 12 million).
48. There is a clear inflection point around 23 million premises passed and going beyond that will soon start to disproportionately affect the weighted average required rental charge for an altnet using "national" pricing – which Openreach itself does within Area 2, and thus with which the altnet(s) will need to compete.



49. Given that the inflection point does not occur (at least in the public version of the FCM) until around 23 million premises, we suggest that Ofcom considers expanding the Large Scale scenario beyond 20 million and up to 24 million premises passed.
50. The Figure 2 illustrates the weighted average required rental charge, based on the Large Scale assumptions, for a premises-passed total ranging from 1 million to 27 million premises passed.

Figure 2: Average FCM Rental Charge



51. The precise amounts shown above differ from those in the consultation document, as we only have access to the public version of the FCM. However, for 20 million premises passed they are very similar - £21.10 in the above graph, compared to £21.21 in the TAR itself.
52. As of the end of 2025 altnets had already exceeded 16 million premises passed in aggregate, compared to the forecast 13.4 million in the FCM for the 2025/26 period, with a take-up of around 21%, which is similar to the number in the FCM for the 2025/26 period. Given this, **the Large Scale scenario has already happened** and the question is now more one of whether the roll out of premises passed will stall at perhaps 17 million or increase over the coming years up to and perhaps beyond the 20 million assumed in the FCM. Our suspicion is that much of any future expansion in premises passed will depend to a large degree now on how Ofcom responds to the current (and indeed likely future) attempts by Openreach to drive the achievable rental charge down.
53. If Openreach's current, and possible future, attempts to reduce prices are prevented by Ofcom, we anticipate that the likely medium-term outcome of premises passed would range from the current 16 million through a mid-point of 20 million up to an upper limit of perhaps 24 million. From the above graph, this would indicate a required rental charge ranging from £20.44 a month up to £21.97, with all other assumptions in the FCM



remaining constant. Again, this is based on the public FCM, although we suspect that the confidential version would produce similar results.

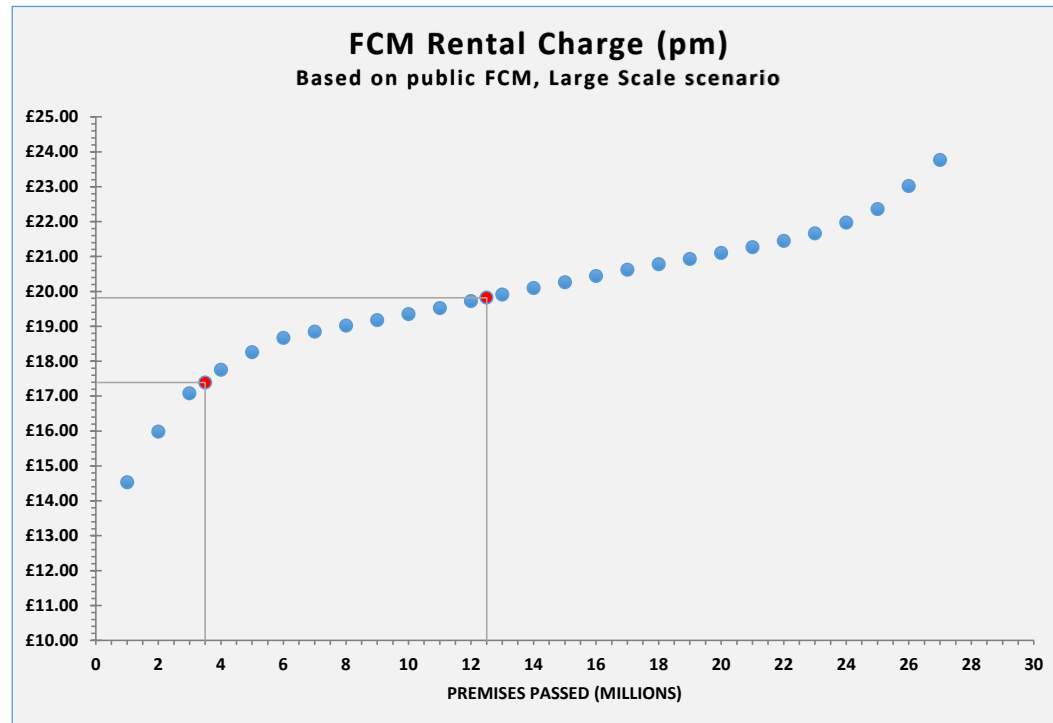
54. We stress here that the FCM rental charge is reflective of what the altnet is **actually able to achieve** as a weighted average amount over the complete 40-year timespan covered by the model, across all bandwidths sold and constant in real terms. This will, by necessity, have to be less than the prices charged by Openreach for an equivalent bandwidth mix, at least until the altnets have become sufficiently established such that the retail ISPs treat them on par with Openreach as a provider of WLA services.

3.4 Implications of Ofcom's current approach with regards to a mid-point price

55. The mid-point price check being used by Ofcom in the consultation document is a simple average of the rental charge output from the FCM for the two scenarios considered (Targeted and Large Scale). Within the TAR, this equates to £17.40 in 2026/27 prices. Minor adjustments are made by Ofcom for the "Frontbook share offer and Box Swap offer" that increase this slightly up to £17.77, and to £18.34 for the "Incremental New to Openreach Customer Offer". However, our discussion below is based on the TAR average for simplicity, which also corresponds very closely to the £17.41 we get from using the public version of the FCM.
56. The generation of a mid-point price in the way that Ofcom has produced it gives us two serious concerns with regards to its likely impact on the market:
 - 1) Any significant reduction in the rental charge achievable by REO altnets risks excluding large portions of the country from viable, sustainable altnet-based WLA competition.
 - 2) The Large Scale scenario has already, in effect, occurred, as evidenced by an existing rollout exceeding 16 million premises passed and similar take-up levels by the altnets compared to the FCM forecasts. Thus, the underlying assumptions of the Large Scale scenario are those that will also be relevant when considering a reduced achievable rental charge.
57. Figure 3 below shows the weighted average rental charge under the Large Scale assumptions for varying levels of premises passed. This time, however, we have added in two additional points (in red) – one (on the left) corresponding to the mid-point price level of £17.40, and the other corresponding to the mid-point premises passed level of 12.5 million premises.



Figure 3: Effect of Midpoint on Premises Passed



58. The premises passed mid-point of 12.5 million premises corresponds to a required real terms rental charge of £19.82 (compared to the base case equivalent with the public version of the FCM of £21.10). **However, at the Ofcom “mid-point” of £17.40 the implied number of premises passed is only 3.5 million – 1.5 million less than that of the Targeted scenario.** The very worrying implication of this is that Ofcom is, in effect, using a mid-point price check that could only ever hope to allow for around 12.5% coverage of Area 2.
59. Our concern with this is that Ofcom is, perhaps unintentionally, sending a message to the altnets, that despite having rolled out coverage to in excess of 16 million homes and achieving respectable take-up rates, Ofcom now believes that those altnets should only have a viable business case covering the cheapest 3.5 million premises.
60. In the table below we illustrate post code area names with greater than 300,000 premises where the FCM shows viable coverage of premises in the area is less than 10% based on a national coverage of the cheapest 3.5 million premises, keeping all other Large Scale scenario assumptions constant.



Table 4: Viable Post Codes under Ofcom Midpoint

Post Code Area Name	Total Premises	% viable in area based on national total coverage (premises) of:		
		20m	5.0m	3.5m
Birmingham	810,884	96%	32%	3%
Belfast	787,212	22%	8%	0%
Sheffield	630,298	98%	0%	0%
Nottingham	544,610	85%	8%	0%
Newcastle upon Tyne	509,986	93%	6%	6%
Leicester	424,703	82%	7%	7%
Liverpool	413,061	98%	37%	9%
Peterborough	393,521	21%	0%	0%
Leeds	372,631	87%	21%	6%
Coventry	349,189	77%	10%	4%
Doncaster	332,340	66%	0%	0%
Derby	330,417	93%	0%	0%
Reading	320,114	55%	6%	6%
Northampton	308,724	69%	9%	9%
Norwich	307,466	53%	0%	0%

61. Apart from households and small businesses in those areas, this is also not likely to go down well with the financial backers of the impacted altnets. Those backers have willingly provided the finance to roll out to over 16 million premises. That cost is now sunk on the expectation that Ofcom would be good to its word in providing the stable regulatory environment to support targeted alternative fibre infrastructure. That stability is now put at serious risk at a time when the altnets need substantial further funding, amounting to hundreds of pounds, to facilitate the final connections to end customers. This additional funding will need to provide a sufficient return to investors over and above the previously expected return for the existing investments, which are now under significant threat. We explore this matter further in Section 5 of this report.



4 MARGIN SQUEEZE

4.1 Introduction

62. A margin (or price) squeeze has the potential to occur where a vertically integrated firm with significant market power upstream supplies an important input to firms operating in a downstream market where it also operates. In this case the WLA market. The margin squeeze will occur if the vertically integrated firm prices the downstream product (WLA) at a level which prevents the altnet from being able to compete for ISP customers.

63. In the TAR, Ofcom recognises that this is a risk in respect of Openreach's market power in PIA and its competitive conduct in WLA:

*"... where a charge control or a basis of charges obligation does not apply in each of the WLA, LLA and IEC markets, we consider that there is a risk of a price squeeze given BT's vertical integration and our conclusion that it has significant market power. We consider that regulation is required to address this risk."*¹⁰

64. The Consultation Document further elaborates:

*"We explained [in the TAR] that concerns could also arise from Openreach setting FTTP prices at a level that results in a price squeeze between its PIA prices and FTTP prices. That is, Openreach's FTTP prices leave insufficient margin for a reasonably efficient operator (which uses PIA) to compete. Such prices may not necessarily be geographically targeted."*¹¹

65. In the context of Openreach's proposed Commercial FTTP Offers, a margin squeeze test addresses these concerns by assessing the potential for a reasonably efficient operator ("REO"), purchasing necessary PIA inputs from Openreach, to compete against Openreach's discounted offer prices.

4.2 Ofcom's margin squeeze analysis

66. In applying the margin squeeze test, Ofcom says that the output increment over which costs and prices are compared is *"all Openreach FTTP broadband products sold to above-baseline NTO customers"*¹² in the appropriate geographical area.¹³ This is because:

- "the baselines are likely to largely reflect NTO volumes placed by ISPs in areas where altnets with whom they have wholesale agreements are not available";¹⁴ and

¹⁰ TAR, Volume 3, paragraph 4.34.

¹¹ Consultation Document, paragraph 2.18.

¹² Consultation Document, paragraph 4.75.

¹³ Consultation Document, paragraph 5.39.

¹⁴ Consultation Document, Figure 4.2.



- “NTO customers placed with Openreach under terms of offer in areas where an ISP previously placed all volumes with a wholesale altnet are likely to be above baseline customers.”¹⁵
67. We agree with Ofcom on these points.
68. In addition, without an incumbency base but with coverage areas that largely overlap that of Openreach, altnet’s will be unable to achieve Openreach’s proportion of non-NTO customers and so will have a lower average ARPU across all their customers if they attempt to match Openreach’s prices on a customer-by-customer basis.¹⁶
69. We also agree with Ofcom’s high-level approach for conducting the margin squeeze analysis:
- Using Openreach’s proposed discounted prices for NTO customers only; and
 - Using the Fibre Cost Model (“FCM”) as a basis for assessing costs in the relevant areas - although, as we discuss below, we disagree with Ofcom’s choice of FCM scenarios in determining the appropriate REO cost.
70. However, Ofcom has erred in its implementation of this approach in three ways:
- I. Ofcom’s method for accounting for the connection charge discounts underestimates the impact.
 - II. The cost range is incompatible with Ofcom’s objectives for competition.
 - III. The margin squeeze test must recognise the importance of altnets needing to price at a discount to Openreach to overcome its incumbency advantages.
71. We elaborate on each of these below.

Ofcom’s method for accounting for the connection charge discounts underestimates the impact

72. The correct method for taking account of the connection charge discount is to annuitise it over a period of time corresponding to a typical customer lifetime reflecting that which ISPs and CPs consider when setting pricing, as referred to in Consultation Document, paragraph 4.86.¹⁷ This captures the direct impact on average monthly ARPU of the **discounted access lines for the output increment for the margin squeeze**. In the case of the £35 discount for the NTO customers, this gives a reduction of £0.73.¹⁸

¹⁵ Consultation Document, Figure 4.3.

¹⁶ This is explained in Consultation Document paragraphs 4.67 to 4.70. In addition, Consultation Document paragraph 4.71 correctly points out that altnets will struggle to identify NTO customers as effectively as Openreach.

¹⁷ Consultation Document, paragraph 4.86.

¹⁸ Assumed 5-year customer life (see Consultation Document, paragraph 4.86) and 10.3% discount rate.



73. Ofcom, however, accounts for the connection charge discount by altering the connection charge effect in the FCM, giving a range of £0.55-£0.60.¹⁹ This method lacks transparency on how the discount impacts the price paid by ISPs and CPs for the incremental lines they purchase under the discount scheme. But more importantly, whilst it captures the effect of the connection charge discount on the total cashflows of an REO on a per line basis over the model lifetime (to 2056/57), **it does not reflect the price paid by the ISPs and CPs for individual discounted access lines over the expected customer lifetime, as required for the output increment in the margin squeeze.**
74. Ofcom does not provide precise details on how the connection charge discount was phased into the FCM assumptions. It appears to be the case that by calculating the impact using cashflows to 2056/57, the calculation is distorted by later years when new provisions (and so the connection charge) are a much smaller proportion of the customer base. This would dilute the connection charge impact when compared to an individual NTO line on which a full connection charge must be paid.
75. In addition, Ofcom's approach to the connection charge discount appears to be inconsistent with its approach for the line rental discount, which was annuitized over the expected customer life.²⁰ There is no reason why the connection charge discount should be treated differently.
76. For these reasons Ofcom should have taken the more direct and transparent approach of annuitising the connection charge discount and treating this as a price reduction.

The cost range is incompatible with Ofcom's objectives for competition

77. To test the NTO discount, Ofcom uses an REO cost range of £13.90-£21.63 with a mid-point of £17.77.²¹
78. The low end of Ofcom's cost range is based on a targeted deployment of 5 million homes with a 40% take-up rate and 9.0% WACC. As we have already discussed, even for the Targeted scenario, none of these assumptions is appropriate.
79. As explained above, altnets have already passed 16 million homes which according to the FCM is consistent with an REO cost of £20.44. Further altnet build to 24 million homes requires an REO cost of £21.97. This is the range that we use below in our margin squeeze analysis.

¹⁹ Calculated from Consultation Document, paragraph 4.94 which shows REO cost ranges of £13.90-£21.63 before the discount and £14.45-£22.23 after the discount.

²⁰ Consultation Document, paragraph 4.85-4.86.

²¹ Consultation Document, paragraph 4.94.



The margin squeeze test must recognise the importance of altnets needing to price at a discount to Openreach to overcome its incumbency advantages

80. Finally, the analysis must recognise the importance of altnets needing to price at a discount to Openreach to overcome its incumbency advantages.²² We understand that nexfibre's experience is that a discount of 8% is required to win wholesale business against competition from Openreach.

4.3 Corrected margin squeeze analysis – Incremental NTO Offer

81. As a consequence of the above arguments, we have amended Ofcom's price squeeze test. Our analysis differs from Ofcom's due to:

- Our treatment of the connection charge discounts as being a price reduction (rather than a cost increase in the FCM);
- Our differing assumptions and approach to use of the FCM. We show two cases of REO costs:
 - £20.44, consistent with the 16 million homes already passed by altnets;
 - £21.97, to achieve 24 million homes passed;
- Our taking account of the discount that REOs need to offer when competing against Openreach.

82. We take the relevant incremental price for the margin squeeze to be Openreach's pre-discounted monthly Frontbook ARPU Share Offer of £19.32, less the monthly value of the discounts offered.

83. In Table 5 below we show the corrected price squeeze test for the composite impact of:

- the 2.5G ONT Box Swap offer valued at £90 which, along with Ofcom, we assume will apply to 11% of customers. Unlike Ofcom, however, we annuitise this saving over the customer lifetime, giving a monthly benefit of £0.21;²³
- the NTO rental discount of £9.50/month which we assume will apply for an average of 24 months over the customers' 60-month lifetime. This gives an "annuitised" monthly value of £4.37 over the customer lifetime;²⁴
- the connection charge discount of £35.00, annuitised as described above to give a monthly value of £0.73.

84. We show results on current prices and also projected through to 2031 in 2026 prices. For this we assume that REO costs stay constant in real terms (i.e. rise at the same rate as CPI).

²² Consultation Document, paragraph 4.70(b).

²³ Consultation Document, para 3.26.

²⁴ Assuming a 10.3% discount rate.



The ARPU ceiling, however, is reduced at CPI-1.25%, consistent with Openreach's proposals.

Table 5: Price squeeze test on NTO discounts and Box Swap offer

	2026	2031
ARPU (2026/7 prices)		
Openreach ARPU cap	£19.32	£17.91
Discount	£5.31	
Openreach post-discount	£14.01	£17.91
Altnet (with 3% required discount)	£3	£3
REO cost (2026/7 prices)		
16 million homes passed	£20.44	£20.44
24 million homes passed	£21.97	£21.97
Price squeeze		
... at 16 million homes passed	-£3	-£3
... at 24 million homes passed	-£3	-£3

Source: SPC Network analysis.

85. The effect of the NTO discounts and Box Swap offer is to reduce the ARPU by £5.31, from £19.32 to £14.01. If we the apply the 3% necessary altnet competitive discount, the REO ARPU is reduced to £11.91. **This is well below the REO costs of £20.44 and £21.97 for coverage of 16 million (the current level) and 24 million respectively, showing the full extent to which the NTO discount fails a margin squeeze test.**
86. We believe this result is, if anything, conservative for two reasons:
 - I. We have used the ARPU cap of £19.32. However, many access lines sold by Openreach, and against which altnets will need to compete, will be lower bandwidths and sold at a lower price than the overall ARPU. This will increase the margin squeeze deficit (i.e. make the margin squeeze worse);
 - II. In the margin squeeze calculations, we have assumed that the rental discount will apply for an average period of 24 months out of a 60-month customer lifetime. If Openreach extend the period of the discount, the margin squeeze deficit will increase significantly since it will cover a greater proportion of the customer life. If the offer is made perpetual, so the value of the discount reaches a full £9.50 a month, the deficit would increase by £5.13.
87. It is also worth noting that the REO ARPU would be below cost, and so fail the margin squeeze test, **even if the 3% altnet discount is not applied**, making this result fully robust to relaxing this assumption.



88. This shows that the finding of a margin squeeze deficit is extremely robust. In fact, the margin squeeze test above could only be passed with an REO cost of £~~25~~²⁵ which, under the FCM, could never be achieved for any coverage of Area 2 premises with when populated with the Large Scale scenario assumptions.
89. It follows from this analysis that we agree with Ofcom's conclusion that the incremental price taking account of the NTO discount and Box Swap offer is below the REO cost range, although for reasons above we believe Ofcom was overly conservative in its approach. Therefore, we support Ofcom's conclusion that the NTO discount scheme should not be permitted.
90. Finally, in the table above we show results projected through to 2031 in 2026 prices. For this we assume that the REO rental cost as calculated by the FCM stays constant in real terms (i.e. rise at the same rate as CPI). The ARPU ceiling, however, is reduced at CPI-1.25%, consistent with Openreach's proposals. Even with no discounts applying in 2031, the effect of ARPU reducing at CPI-1.25% whilst costs stay constant in real terms, result in the margin squeeze deficit increasing to £~~25~~ (under 24 million homes coverage). This extends the timeline of our conclusion: no Openreach discounts should be allowed throughout the TAR period to 2031.

4.4 Corrected margin squeeze analysis – Geographic NTO Offer

91. In this section we present our price squeeze analysis of the Geographic NTO Offer in the VMO2 Area. We follow the approach we described in answer to Question 4.1, in which we explained that Ofcom has erred in its implementation of the price squeeze test. We make three necessary changes to Ofcom's analysis:
 - I. We treat connection charge discounts as being a price reduction (rather than a cost increase in the FCM);
 - II. We adopt a differing approach and assumptions in using the FCM. We show two cases of REO costs:
 - £20.44, consistent with the 16 million homes already passed by altnets;
 - £21.97, to achieve 24 million homes passed;
 - III. We take account of the discount that REOs need to offer when competing against Openreach.
92. As per our analysis of the NTO Offer, we take the relevant incremental price for the margin squeeze to be Openreach's pre-discounted Frontbook ARPU Share Ceiling offer of £19.32, less the monthly value of the discounts offered.
93. In Table 6 below we show the corrected price squeeze test for the composite impact of:

²⁵ This is the level at which the margin squeeze deficit is reduced to zero.



- The 2.5G ONT Box Swap offer valued at £90 which, along with Ofcom, we assume will apply to 11% of customers. Unlike Ofcom, however, we annuitise this saving over the customer lifetime, giving a monthly benefit of £0.21;²⁶ and
- The connection charge discount of £50.00, annuitised as described above to give a monthly value of £1.05. As we explain in answer to Question 4.1, the correct method for taking account of the connection charge discount is to annuitise it over a period of time corresponding to a typical customer lifetime considered by ISPs and CPs when setting pricing, as referred to in Consultation Document, paragraph 4.86.²⁷ This captures the direct impact on average monthly ARPU for the **discounted access lines in the output increment for the margin squeeze**. In the case of the £50 discount for the VMO2 Area this gives a reduction of £1.05.²⁸ Ofcom, however, account for the connection charge discount by altering the connection charge effect in the FCM, giving a range of £0.69-£0.76.²⁹ As we explained in answer to Question 4.1, this approach is incorrect.

Table 6: Price squeeze test on VMO2 discounts and Box Swap offer

	2026
ARPU	
Openreach ARPU cap	£19.32
Discount	£1.26
Openreach post-discount	£18.06
Altnet (with 15% required discount)	£✂
REO cost	
16 million homes passed	£20.44
24 million homes passed	£21.97
Price squeeze	
... at 16 million homes passed	-£✂
... at 24 million homes passed	-£✂

Source: SPC Network analysis.

94. The effect of the VMO2 Area discounts and Box Swap offer is to reduce the ARPU by £1.26, from £19.32 to £18.06. If we the apply the ✂% necessary altnet competitive discount, the REO ARPU is reduced to £✂. **This is well below the REO costs of £20.44 and £21.97 for coverage of 16 million (the current level) and 24 million respectively.**
95. As with our analysis of the NTO discount, we believe this result is, if anything, conservative. We have used the ARPU cap of £19.32. However, many access lines sold by

²⁶ Consultation Document, para 3.26.

²⁷ Consultation Document, paragraph 4.86.

²⁸ Assumed 5-year customer life (see Consultation Document, paragraph 4.86) and 10.3% discount rate.

²⁹ Calculated from Consultation Document, paragraph 5.45 which shows REO cost ranges of £13.90-£21.63 before the discount and £14.59-£22.39 after the discount.



Openreach, and against which altnets will need to compete, will be lower bandwidths and sold at a price lower than the ARPU. This will increase the margin squeeze deficit.

96. It is also worth noting that the REO ARPU would be below cost even if the 3% altnet discount is not applied, making this result fully robust to relaxing this assumption.
97. In fact, the margin squeeze test above could only be passed with an REO cost of £30³⁰ which, under the FCM, could only be achieved with a coverage of around 1.5 m Area 2 homes, under the Large Scale scenario assumptions.
98. It follows from this analysis that we disagree with Ofcom's conclusion that the incremental price taking account of the VMO2 Area discount and BOX Swap offer is above the REO cost range.

4.5 Implications of the price squeeze test result

99. The main determinant of the outcome of the price squeeze test is the REO rental cost. In turn, we have shown above that the main driver of the REO cost is the extent of network coverage. It follows that the outcome of the price squeeze test depends on Ofcom's ambition for altnet presence and competition in Area 2.
100. Use of the Targeted scenario FCM assumptions in the test, thereby tending towards greater acceptance of Openreach discounts, is consistent only with a limited altnet investment in Area 2 coverage. Whereas use of the Large Scale scenario assumptions is necessary to achieve genuine competition throughout a large majority of Area 2.
101. Put another way, setting a cost too low (below the actual REO cost) risks disincentivising altnet investment and losing the benefit of network competition that is key to the TAR strategy.³¹ Setting a cost too high, however, risks introducing a slight premium in current consumer prices but, in the medium to long term, this will be offset by greater competition.
102. It is clear, therefore, that the benefits of assuming an REO cost too high outweigh the costs of assuming it too low. The American academic lawyer, Fred McChesney, discussed the benefits of this in a seminal paper in 2003³² where he argued that antitrust was better served by authorities making Type II errors, and fail to punish a guilty party, rather than making Type I errors, and imposing remedies on an innocent party. Type II errors could be corrected by the market as more efficient entrants will succeed at the expense of less efficient entrants, whereas a Type I errors would not be self-correcting and so would need

³⁰ This is the level at which the margin squeeze deficit is reduced to zero.

³¹ As recognised in the Consultation Document, paragraph 2.1 and 2.19.

³² McChesney, F. S. (2003). 'Talking'Bout My Antitrust Generation Competition for and in the Field of Competition Law'. *Emory LJ*, 52, 1401.



judicial action. Bauer and Bohlin (2003) built on McChesney to make a similar point in relation to dynamic and static regulation³³.

103. Similar points have been made the UK Regulators Network (UKRN) and the CMA in relation to the regulated WACC. The UKRN referred to the welfare impact of underinvestment if the WACC is set too low, which is seen as a worse outcome for customers than over-remuneration.
104. The CMA made a similar point for setting the WACC above the mid-point due to consumer welfare implications of under-investment in its review of Ofwat's PR24. The CMA Final Decision said:

*"We select a point estimate for the cost of equity of 5.70%, 30bps above the mid-point of our CAPM range. This is primarily to reduce the risk of the sector under-delivering on its large-scale capital programme needed to improve services and resilience, given the potential welfare implications of underinvestment."*³⁴ (p.11)

105. If Ofcom were concerned that setting the cost too high may encourage investment by individual inefficient altnets, we believe that the arguments set out above mean they should not be. The self-correcting market mechanism means that an inefficient altnet (i.e. one that does not meet the REO standard) would lose out to more efficient rivals. Even if the REO standard were set too loosely, Ofcom would be able to adjust prices Openreach could charge to allow it to compete with REOs.

³³ Bauer, J. M., & Bohlin, E. (2008). From static to dynamic regulation: Recent developments in US telecommunications policy. *Intereconomics*, 43(1), 38-50.

³⁴ CMA (2026) "WATER PR24 REFERENCES Final Determinations Volume 4: Allowed return - chapter 7" P. 11

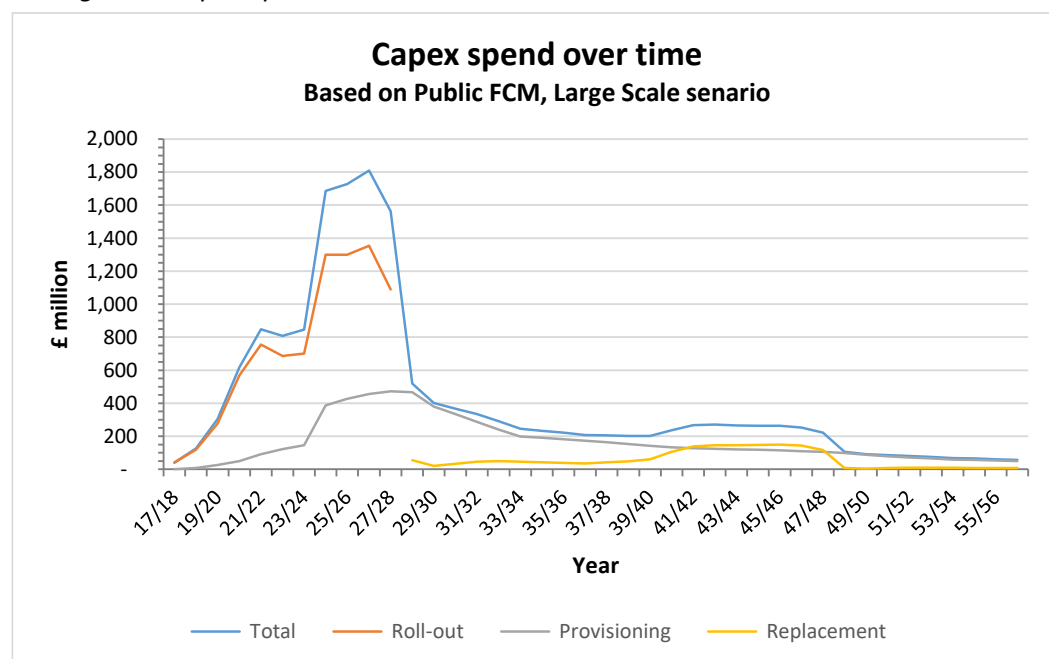


5 OTHER MATTERS

5.1 The continuing need for capex funding by altnets

106. Although, both in the FCM and in reality, the roll out of premises passed is largely complete, there remains a continuing need for additional capex to fund provisioning and replacement.
107. Figure 4 below, taken from the FCM under the Large Scale scenario illustrates the differing needs for capex over the model period. We obtained the data used from the “Network Investment (Capex)” section of worksheet [Input_Network] of the Cost Recovery Module (named range “network_capex”). This data was then analysed and grouped into:
- I. The initial rollout of premises passed
 - II. The provisioning of active customers (take-up of premises passed)
 - III. Replacement capex, once the invested capex had reached its assumed end of life.

Figure 4: Capex Spend Over Time



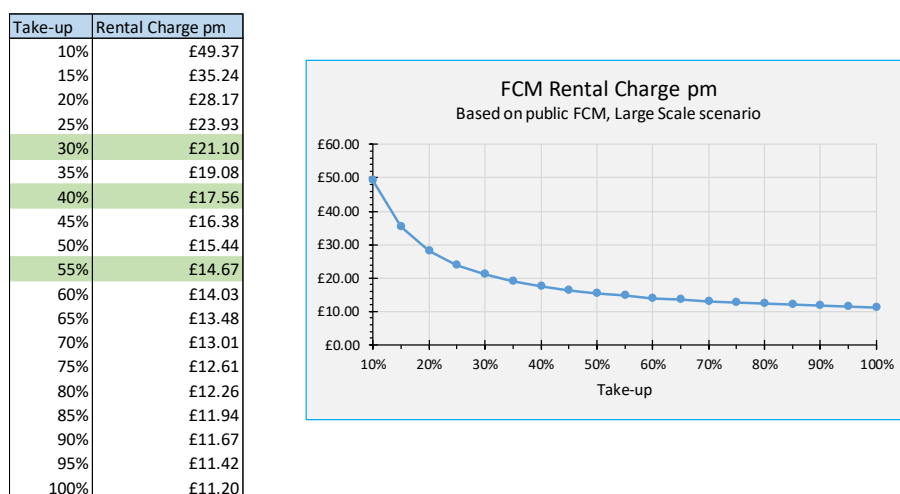
108. The altnet emphasis is switching from capex to fund rollout (premises passed) towards capex to fund provisioning (take-up of premises passed). The amounts involved are far from insignificant and comprise in aggregate hundreds of millions of pounds each year. Over the next 10 years this totals around £3.2 billion.



5.2 Impact of achievable take-up on the required rental charge

109. The figure below illustrates how the required rental charge varies with take-up for take-up percentages ranging from 10% of premises passed through to 100%. This is based on the Large Scale scenario in the public FCM with all assumptions held constant except for the take-up percentages for Area 2 in worksheet [Deployment scenarios] of the Volumes module.

Figure 5: Impact of Take-Up on Rental Charge



110. This shows that, according to the assumptions made for the Large Scale scenario, the lower bound for the required rental charge would be £11.20 pm for a pure monopoly provider, rising to £14.03 pm for a provider with a 60% market share. The £14.03 pm compares to an amount of £14.69 pm that can be derived from the latest BT Regulated Financial Statements (RFS) for the period 2025/26. Based on the graph, the market share “implied” by the £14.69 pm would be around 55%. Given that Openreach probably has between 50% and 70% of the relevant WLA market (encompassing all technologies: HFC, copper, FTTC and FTTP), we think that the public FCM outputs seem to be plausible at least in terms of general trends etc.
111. According to the public FCM, the cheapest rental charge would occur with a single monopoly provider. However, history indicates that if this was the market reality then two factors would almost certainly come into play:
- I. WLA services would have to fall under cost-based price regulation.
 - II. The monopoly provider would have no inherent incentive to become and/or remain “efficient”.
112. The implication of the above bullets is that the rental charge will rise considerably and quite possibly exceed the current average level that we derived from the latest BT RFS.



113. Ofcom has an aspiration for as much of Area 2 as practical to become “competitive”, which Ofcom has defined as occurring when there are at least two established commercial rivals to Openreach. The Large Scale scenario assumes that a take-up of 30% of premises passed is practical, and this forms the basis of the Upper Level used by Ofcom in the consultation document when assessing its mid-point comparator that Ofcom then compares to the discounted prices proposed by Openreach.
114. For there to be two established commercial rivals to Openreach, those two rivals will in aggregate require a combined 60% market share, leaving the remaining 40% for Openreach. Clearly, this would increase Openreach’s own per-line costs, and from the graph we estimate that they might rise from a current £14.67 pm to around £17.56 pm, compared to the required rental charge for the two established commercial rivals of around £21.10 pm. Even here, the extent to which the established commercial rivals could continue to compete on a sustainable basis would depend on the extent to which Openreach (or indeed whichever of the three providers held the highest market share) could exploit its lower per-line cost base – and at least an ongoing degree of market oversight by Ofcom might still be required.
115. If this situation did arise, then we would expect all three WLA providers to compete actively with each other, and the market shares each held to vary over time – perhaps with all three oscillating between 30% and 40%, depending on market conditions and the relative successes of their various sales and marketing strategies. However, suffice to say that at least until two commercial rivals have established themselves, there would be a need to restrain Openreach’s current ability to price below the £21.10 shown to be required based on the Large Scale scenario.

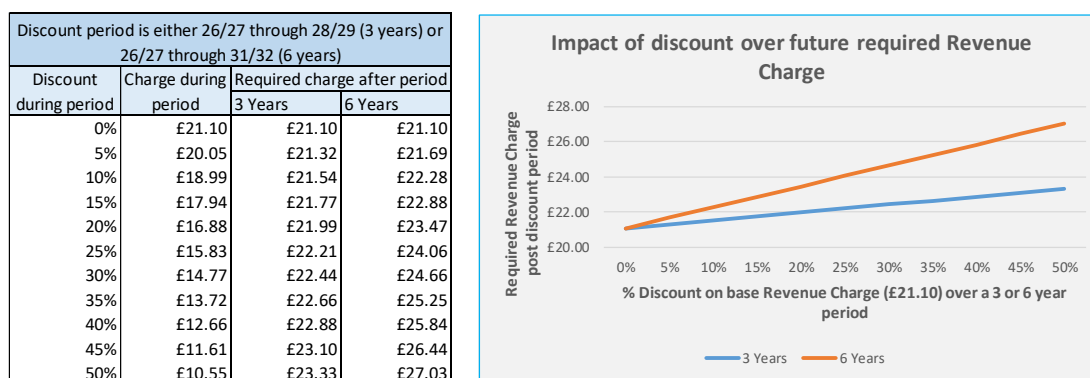
5.3 Implications of a constant (in real terms) rental charge from the FCM versus “real life” revenue generation

116. The output of the FCM is a constant, in real terms, rental charge that must be achieved by the altnet over the time period covered by the model in order that the altnet is able to recover the specified WACC (10.3% in the case of the Large Scale scenario). There are two specific implications that result from this:
 - The rental charge is only assumed to rise in line with CPI, but is assumed to rise in line with CPI.
 - Any shortfall in the rental charge in early years would need to be recouped in later years by a charge that is higher than the constant real terms charge identified by the FCM if the altnet is to recover the assumed WACC.
117. The first bullet is relevant if the altnets are having to compete with an Openreach ARPU that is reducing over time in real terms, especially if that ARPU is already at, or even below, the required rental charge indicated by the FCM as being necessary.



118. The second bullet is relevant if Openreach is allowed to offer so-called short-term discounts to either the ARPU cap or to the already heavily discounted prices available under the existing Equinox offers.
119. When faced with discounts (noting that rebates have the same impact, even though they are not termed “discounts” by Openreach), altnets are basically faced with two choices. They either aim to match the price and conditions of the FTTP Offers so as not to lose customers, or they retain their current pricing structure and risk losing customers. Clearly, there is also middle ground that the altnets could adopt that could comprise a degree of discounting coupled with an acceptance that there will still be an impact on the customer base.
120. We have run scenarios on the public version of the FCM to assess the potential impact of such Openreach discounting over a period of time, after which we have assumed that those Openreach prices would revert to their previous levels in real terms. The scenarios consider the shortfall in revenues over the period of time where the discounts are in place, with that period either assumed to be 3 years or 6 years. The shortfall is assumed to be caused either by a discount to the base case FCM rental charge, or a reduction in the number of active connections (which we have modelled as a reduction in the growth of take-up over the 3 or 6 year period). The results of this analysis are illustrated in Figures 6 & 7 below.

Figure 6: Impact of discount on future required revenue charge



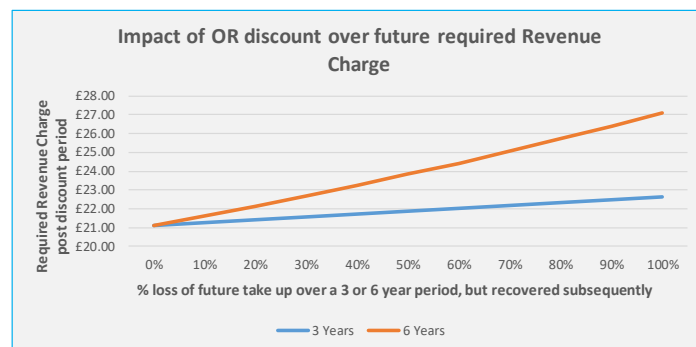
121. For this first graph we applied a varying percentage discount to the base case £21.10 monthly rental charge for either a 3 or 6 year period. From the end of the period onwards, we calculated what the post-discount rental charge would need to be in order to have an overall neutral impact on the return compared to the base case. For example, if a 20% discount were applied over a period of 3 years, then the £21.10 base case rental charge would drop to £16.88 over the discount period, but would then need to rise to £21.99 in order to recover from the impact of the discounting. The fundamental issue here, of course, is that Openreach would just revert to the pre-discounted price (in real terms) and



the altnets would be faced with competing with that price (assumed to be £21.10 in this case) and would thus not be able to rise their own price to £21.99.

Figure 7: Impact of OR Discount on future required revenue charge

% loss	3 Years	6 Years
0%	£21.10	£21.10
10%	£21.25	£21.61
20%	£21.40	£22.14
30%	£21.55	£22.68
40%	£21.70	£23.24
50%	£21.85	£23.83
60%	£22.01	£24.43
70%	£22.17	£25.06
80%	£22.33	£25.71
90%	£22.49	£26.38
100%	£22.65	£27.08



Example assuming discounts exist for a 3 year period (26/27 through 28/29) before being removed							
	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Premises passed	13,375,000	15,750,000	18,125,000	20,000,000	20,000,000	20,000,000	20,000,000
Take-up increase in year		712,500	712,500	662,500	450,000	331,250	212,500
Base case take-up	2,825,000	3,537,500	4,250,000	4,912,500	5,362,500	5,693,750	5,906,250
		Reduction in customers due to % loss of future take-up due to not matching discount					
10%		(71,250)	(142,500)	(208,750)	(208,750)	(142,500)	(71,250)
Example take-up for 10% impact	2,825,000	3,466,250	4,107,500	4,703,750	5,153,750	5,551,250	5,835,000
20%		(142,500)	(285,000)	(417,500)	(417,500)	(285,000)	(142,500)
30%		(213,750)	(427,500)	(626,250)	(626,250)	(427,500)	(213,750)
40%		(285,000)	(570,000)	(835,000)	(835,000)	(570,000)	(285,000)
50%		(356,250)	(712,500)	(1,043,750)	(1,043,750)	(712,500)	(356,250)
Example take-up for 50% impact	2,825,000	3,181,250	3,537,500	3,868,750	4,318,750	4,981,250	5,550,000
60%		(427,500)	(855,000)	(1,252,500)	(1,252,500)	(855,000)	(427,500)
70%		(498,750)	(997,500)	(1,461,250)	(1,461,250)	(997,500)	(498,750)
80%		(570,000)	(1,140,000)	(1,670,000)	(1,670,000)	(1,140,000)	(570,000)
90%		(641,250)	(1,282,500)	(1,878,750)	(1,878,750)	(1,282,500)	(641,250)
100%		(712,500)	(1,425,000)	(2,087,500)	(2,087,500)	(1,425,000)	(712,500)
Example take-up for 100% impact	2,825,000	2,825,000	2,825,000	2,825,000	3,275,000	4,268,750	5,193,750
							6,000,000

122. For this second graph, we applied a percentage loss to the growth in the take-up over either a 3 or 6 year period. The take-up adjustments were made to the Area 2 FTTP rentals row in worksheet [Service volumes] of the Volumes Module. At the end of the period, we then let the take-up recover over an equivalent time period, such that by the end of the recovery period the take-up was the same as the base case. Again, from the end of the assumed Openreach discount period onwards, we calculated what the post-discount rental charge would need to be in order to have an overall neutral impact on the return compared to the base case.
123. For example, if there were a 50% impact on the growth in take-up over a three year period that would represent a shortfall in customer connections of just over one million by the end of that three years. Although these are then assumed to be recovered over the subsequent three years (after the altnets were no longer having to face competing with



discounts), there would still be a need to be able to obtain a rental charge, in real terms, of £21.85 compared to the base case £21.10. Again there is the fundamental issue here that Openreach would just revert to the pre-discounted price (in real terms) and the altnets would be faced with competing with that price (assumed to be £21.10 in this case) and would thus not be able to rise their own price to £21.85. However, in addition to that the altnets would be faced with having to grow their take-up back to the base case levels whilst having to also charge a higher rental price.