

Ofcom's WLA proposals: impacts on full fibre investment decisions

This paper summarises our concerns with Ofcom's proposals for regulating the price of 40/10 VULA services provided over any full fibre connection. This proposal would directly impact on plans to supply full fibre connections to new sites and other locations currently not served by any fibre services. Ofcom's proposed prices – based on a model of providing 40/10 services using fibre to the cabinet technology – do not reflect the costs of serving these locations and do not, therefore, send economically efficient pricing signals to any investors. The risk is that Ofcom's approach deters such investment altogether. Ofcom's proposals would also impact ambitions to deploy full fibre connections as overbuild to existing fibre customers. This paper proposes that Ofcom allows more flexibility on prices on full fibre lines.

Introduction

1. Openreach is planning to increase the number of UK premises served by full fibre connections and is actively considering options for the precise scale, pace and location of the network deployment required. Announced plans would increase the provision of full fibre connections to newly built sites and locations currently receiving no superfast broadband services (i.e. served only by copper connections). We are also consulting with industry about larger-scale deployment of full fibre as an overbuild on current VDSL fibre to the cabinet (FTTC) superfast connections.
2. To underpin these plans, we need to generate long term value from the full fibre connection that is sufficient to recover deployment costs, taking full account of the risks and uncertainties surrounding such a long term forecasting exercise. Ultimately this requires a forward-looking assessment of supply and demand conditions at a local level to understand differences in key parameters such as cost per home passed, expected take-up in face of competition choices and willingness to pay for different service offerings. We also need to consider how any long term net value we might expect to create from investments in full fibre compares to alternative investment strategies – e.g. to 'do nothing'/defer investment ('wait and see') or, where feasible, to deploy alternative technology to serve the customers.
3. Ofcom's proposals in the Wholesale Local Access (WLA) market review directly impact these assessments. Ofcom's base case proposals would require Openreach to offer a 40/10 service on any full fibre connection at a price that would be almost 30% lower than the prices charged today. Given only limited customer willingness to pay for bandwidths in excess of 40Mbit/s, this proposed regulation would significantly reduce the value that Openreach can expect to generate from installed full fibre lines, making the case for all investment options more challenging. Given that Ofcom's 'anchor product' approach bases regulated 40/10 prices on the lower cost of supplying services using VDSL FTTC technology overlaid on an existing copper network, Ofcom's approach presents significant risks that we would not be able to recover costs from all investments in full fibre connections. In such circumstances, there is a clear risk that our plans would need to be scaled back.
4. In our responses to Ofcom's March 2017 and September 2017 WLA consultation proposals, we argued for greater flexibility around our pricing on full fibre lines. This note provides further arguments supporting that request. We first set out a brief summary of Ofcom's pricing

proposals and rationale in order to identify the core logic and principles underpinning the proposed ‘anchor product’ pricing approach. We then explain why Ofcom’s proposals, in contrast to the stated objectives of the approach, fail to support efficient forward-looking investment decisions.

Ofcom’s proposals for regulating Openreach fibre prices

5. Ofcom’s March 2017 WLA Consultation proposed, among other things:
 - Regulatory charge controls for MPF and FTTC 40/10 rentals from March 2018 resulting in lower charges in the period to 2020/21; and
 - A new regulatory requirement to provide an FTTP 40/10 Voice and Data service at a rental price equal to the reduced regulated prices for MPF plus FTTC 40/10.
6. Ofcom issued revised price controls in its September 2017 WLA Consultation. Under the revised base case price proposals Openreach would be required to set nominal FTTP 40/10 prices as set out below¹:

	MPF (SML1)	FTTC 40/10	FTTP 40/10 Voice and Data
Current	£84.38	£88.80	£192.48
2018/19	£83.70	£67.86	£151.56
2019/20	£82.56	£59.03	£141.59
2021/22	£81.81	£54.66	£136.47
% reduction over 3 years	-3%	-38%	-29%

Ofcom’s rationale for constraining prices on full fibre lines

7. In volume 1 of the March 2017 Consultation, Ofcom provisionally concluded that it was appropriate to establish cost-based charge controls for Openreach’s provision of 40/10 VULA connections. We do not repeat our concerns with whether this proposal is consistent with the fair bet principle in this note.
8. 40/10 VULA connections could be supplied by different technologies – VDSL FTTC or full fibre/FTTP – with different deployment costs. In setting cost-based charges for 40/10 VULA connections, therefore, Ofcom has had to consider which technology – or mix of technologies – should be used to model the efficient forward looking costs of supply.
9. Ofcom notes in volume 2 of the March 2017 Consultation that its general preference is to model the efficient forward-looking costs of providing any regulated service by reference to the “*most efficient technology that performs the same function as the current technology*”². In this context, Ofcom acknowledged that if an “...*infrastructure provider deployed a network today, we would expect them to deploy an FTTP network.*”³

¹ Figures exclude the impact of the separate proposals to uplift to support the Universal Broadband Commitment (UBC)

² March 2017 WLA Consultation, volume 2, para 2.50

³ March 2017 WLA Consultation, volume 2, para 2.53

10. However, Ofcom raised a number of concerns about using FTTP technology in its cost modelling, including the difficulty of accurately modelling such costs in a period of technological change. Ofcom also suggested that FTTP costs would need to be “abated” to reflect the “lower functionality” of the charge controlled services (i.e. 40/10 VULA) relative to the full capabilities of a full fibre connection (i.e. the ability to use such connections to provide VULA connections at higher bandwidths). Ofcom therefore proposed not to base prices on the costs of supplying FTTP, noting:

“During a period of technological change, we apply the principle that consumers of existing services are not made worse off by the adoption of new technology. We may therefore prefer to use an ‘anchor pricing’ approach. The anchor pricing approach anchors the price (and quality) of existing services to the legacy technology, even if the services are provided over a new technology.”⁴

11. The proposed regulated 40/10 VULA prices are therefore driven by a cost model based on supplying *all* forecast demand for superfast services on the Openreach network using VDSL FTTC technology.

12. Ofcom’s policy intent in adopting the chosen anchor pricing approach is:

- To leave the technology choice about how to supply the 40/10 VULA service to Openreach based on our own forward-looking assessment of value⁵; and
- To ensure that this technology choice does not result in customers paying higher charges for a 40/10 VULA than they would face if the equivalent service were supplied over an FTTC connection (where they would pay no more than the regulated charge for MPF plus 40/10 FTTC)⁶.

13. The logic of the anchor product approach implies that *any* customer requiring a 40/10 VULA service could be economically supplied at the regulated prices using FTTC technology. If this assumption holds, then Ofcom may believe that any decision – whether by Openreach or a potential alternative access provider – to serve that customer via FTTP at a higher upfront investment cost would be efficient in that it reflects the scope for long term operational cost savings and/or upside revenue opportunities arising as a result of the higher functionality of the line.

14. However, it follows that the anchor pricing approach will fail to drive efficient investment decisions where:

- The efficient costs of supplying an individual connection in a given location via FTTC are higher than the average unit costs of supply modelled by Ofcom; and/or
- Openreach and/or other potential access investors are limited in their ability to extract

⁴ March 2017 WLA Consultation, volume 2, para 2.51

⁵ E.g. at March 2017 WLA Consultation, volume 2, para 2.52, Ofcom states that the anchor pricing approach: *“gives the regulated firm incentives to invest in new technology only when providing services over the new technology would lower overall costs and/or would enable it to provide higher quality services for which consumers are willing to pay a premium.”*

⁶ E.g. see March 2017 WLA Consultation, volume 2, para 3.39: *“Thus, customers in FTTP-only areas should have the price protection applicable to equivalent FTTC services. Without this, there would be a risk that such products would be excessively priced, leading to detriment for customers in those areas.”*

additional value from the customer for the higher overall functionality provided by the FTTP line compared to an FTTC line.

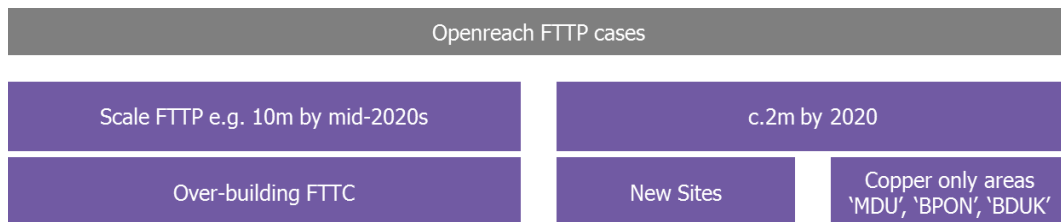
15. We set out below how and why Ofcom’s proposals raise concerns against these two factors and would, therefore, fail to support Openreach efficient FTTP investment plans.

Openreach FTTP investment plans

16. We are currently working towards increasing the volume of FTTP connections in three areas:

- **New sites** or greenfield sites: i.e. to supply newly constructed homes in locations where there is no existing fixed line infrastructure.
- **Copper only areas** or ‘brownfield not spots’: i.e. where there is copper infrastructure in place, but no FTTC. A wide number of commercial and part public funded programmes fall into this category: e.g. connecting apartment blocks (“MDU”), business parks & retail parks (“BPON”), retrofitting recently built copper-only sites with FTTP (“Retrofit”), and further expansion into BDUK areas.
- **Over-building FTTC**: i.e. where we would provide FTTP connections in an area already served by FTTC.

17. The potential scale of deployment in each of these areas is set out below. In aggregate, this could result in the provision of 2 to [8] million FTTP lines by the end of this market review period. However, deployment at this scale would be contingent on industry consultation and on regulatory pricing requirements imposed by Ofcom’s final WLA decision:



18. We set out the specific concerns presented by the WLA proposals below.

#1: Ofcom’s proposed FTTC price does not reflect the efficient forward-looking costs of supplying locations not currently served by fibre

19. Ofcom’s ‘anchor product’ model to determine the costs of supplying 40/10 VULA services is shaped by a number of key assumptions about network coverage, configuration and future volume growth. These assumptions are not appropriate when considering deployments required to serve new sites and copper-only locations:

- Ofcom’s incremental customer take-up assumptions are based on assumed growth in the number of UK households (over 250-300k p.a. in this period) and ongoing increases in broadband and superfast broadband penetration.
- However, Ofcom has configured an FTTC network based on deployment that broadly mirrors (and is reconciled against) the overlay network put in place by Openreach up to 2015/16 (in terms of cabinet locations, cabinet size, etc) and which assumes that network coverage is complete by 2015/16 – e.g. no more exchanges or PCPs are enabled from this

point to expand the reach of the network.

- This means that Ofcom's model does not explicitly capture any expansion of the network to serve the newly constructed housing sites underpinning the assumed household growth or to drive overall superfast penetration by increasing availability to MDUs, BPON or any other brownfield sites outside the scope of assumed network coverage in 2015/16.
 - In other words, all growth in demand – whether driven by increases in the total number of households or by penetration assumptions – is assumed to be met by incremental expansion of the assets within the 2015/16 network footprint - i.e. additional customers driving the need for extra line cards, etc. So, for instance, Ofcom's model assumes there is no need to install extra cabinets and equipment in those cabinets and no need for extra duct to PCPs, tie cables, etc.
20. In these circumstances, there is no reason to expect that the unit costs derived by Ofcom's model will be representative of the costs of providing services using FTTC (even if technically feasible to do so) in the greenfield and brownfield locations we are planning to serve. The unit costs generated by the model would only reflect average costs of serving the forecast future demand volume *within* the 2015/16 network footprint. The level of demand forecast by Ofcom and driven by household growth will clearly overstate demand in that footprint and the modelled network will not capture geographic differences in build costs or take-up assumptions.
21. A requirement to supply 40/10 VULA services on any FTTP line to those locations at the modelled FTTC cost will therefore fundamentally skew the investment decision relating to these locations. This is in addition to the fact that Openreach would be expressly prevented from charging the customer any premium for a 40/10 service provided over FTTP to reflect the improved customer experience arising from the provision of that service via FTTP rather than FTTC (assuming that were possible).
22. The upshot of these factors is to fundamentally undermine the economic efficiency arguments that underpin, in principle, the anchor pricing approach. The anchor product price is not serving to drive efficient investment decisions about how to serve these greenfield and brownfield locations, but actually to deter any investment in those locations.
23. To provide some indication of the impact that Ofcom's proposed pricing regulation would have on the economics of investing in sites not currently served by superfast services, we set out some indicative costs and revenues below.

[X]

The first table below shows indicative economics of supplying new site locations. The figures shown are simplified⁷, but show a working scenario based on assumptions about deployment costs per home passed and take-up. Under this scenario, at current prices for the 40/10 anchor product, investment would payback at a modelled [X]% discount rate in just under [X] years⁸.

24. Using the same cost and take-up scenario but reducing prices to current MPF + FTTC 40/10 pricing levels (i.e. removing the current price premium on FTTP Voice and Data connections) would extend the payback by [X] years. Allowing for the 30% price reduction in rental charges proposed by Ofcom would push payback in this scenario out beyond [X] years.
25. Given risks (e.g. lower take-up due to competition) and geographic differences around the cost per premises passed, this scale of impact on payback is likely to make a number of potential investments uneconomic.
26. The second table below then shows illustrative economics of building FTTP in brownfield, copper only areas. While build costs per home passed are expected to be lower, take-up would also be lower in these locations given the availability of copper broadband services. Investments in these areas would also need to offset lost margins on the copper services that would be replaced.
27. With FTTP 40/10 pricing as of today at ~£16/month and at the assumed deployment costs and take-up, a [X] year payback could be possible. Aligning pricing to the MPF + FTTC 40/10 prices today would take payback to [X] years and the proposed 30% reduction would make the investment case uneconomic.

#2: WLA impacts on overbuilding FTTP in existing superfast areas

28. The economics of building in existing FTTC areas are even more challenging than shown above. We are currently consulting with industry about these challenges.
29. The key concern with the WLA is that options to support scale deployment in existing FTTC areas should not be precluded by imposing unduly rigid rules on FTTP pricing in this control period. For instance, we want to explore options to switch-over lines to the fibre network once available in order to reduce operational costs, support take-up and drive incremental value.
30. However, until any switch-over plans are agreed, we see no justification for any regulatory pricing constraints on FTTP lines in overbuild areas. Prices would be constrained by the availability of 40/10 services on FTTC lines and we should be free to either offer 40/10 services at a premium on FTTP lines (to reflect higher value of such services) or to not offer such services at all (e.g. 'entry level' FTTP services might start at higher bandwidths). This would at least allow us to extract full customer value based on willingness to pay for the higher performance/functionality offered by FTTP line relative to the available FTTC services.

Conclusion: we require flexibility on FTTP prices to support investment

31. In light of the above assessment, and as set out in our responses to the March and September

⁷ One of the major simplifications is that it allows for an average take-up, while the ramp up of take up will typically mean that it takes longer to recover given the time value of money

⁸ Among other things, we use a simplified discount rate for illustrative purposes only and have not, therefore, attempted to capture project-specific risks which would drive a higher discount rate.

WLA Consultations, we suggest that Ofcom's proposals are adjusted to allow:

- Flexibility to set charges for all services supplied over full fibre lines (including 40/10 services) in locations where no superfast connection service currently exists on a fair and reasonable basis. This would (a) support fair downstream competition on those lines and (b) allow prices to be set at levels that reflect the specific costs of supply.
 - No regulatory constraints on charges for services provided over full fibre lines in areas where FTTC 40/10 services are already available.
32. We would note that in many greenfield and brownfield locations we would expect to face competitive constraints on our pricing given alternative fibre network build (particularly into new sites, where in some cases there may also be competitive tendering for supply) and, for brownfield, the ongoing availability of copper services – e.g. in a brownfield site we would need to price in way that drove take-up from a base of customers currently receiving copper broadband services.
33. Allowing flexibility within a fair and reasonable requirement, would not mean that prices were unconstrained. To the extent, however, that Ofcom is concerned about price levels in the absence of a specific charging requirement on a 40/10 service, we would suggest prices could be capped at the current FTTP 40/10 of ~£16 in real terms (i.e. CPI + 0%) during this control period with pricing flexibility allowed for higher speeds.
34. Finally, we also repeat our request that Ofcom's approach does not preclude exploration of commercial options arising from the ongoing FTTP industry consultation.

Openreach

30 November 2017