Case T-011

Wholesale broadband access services: Price review

Non-statutory Final Decision

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Contents

1 Executive summary

1.1 This document is the Jersey Competition Regulatory Authority (**the Authority**)'s non-statutory Final Decision (**Final Decision**) for the wholesale broadband access services price review. It follows the non-statutory Draft Decision Consultation (**Draft Decision**)[1] published in January 2021 and has been issued alongside a statutory Initial Notice (see document JCRA 21/24).

1.2 Wholesale broadband access services are used by Other Licensed Operators (**OLOs**) to provide broadband to their retail customers over the JT fibre to the premises (**FTTP**) network. In this price review the Authority, supported by Frontier Economics,[2] has examined wholesale broadband access services in Jersey and set a price control on JT, on a forward-looking basis.

1.3 A price control has been applied as a remedy to address JT's Significant Market Power (**SMP**)[3] in the broadband market. The price control is consistent with generally accepted principles and applied proportionately to Jersey. It has been set to both:

- promote more effective competition at the retail level; and
- provide JT, the licensed operator with SMP, the opportunity to recover its efficiently incurred costs plus an appropriate return on investment.

1.4 Accompanying this Final Decision and separate Initial Notice document is:

- a Frontier Economics report "Wholesale broadband access services in Jersey: Price review" (**Frontier Report**).[4] The Frontier Report sets out the detail behind the approach adopted for this price review and is cross-referenced within this document.
- Non-confidential versions of responses to the Draft Decision, in total five responses were received from Airtel-Vodafone, Clear Mobitel, Homenet, JT and Sure. An overview of the responses and the Authority analysis undertaken in response to them is provided in this document.

1.5 A summary of the key elements of the Final Decision and where further detail on them can be found is set out in Figure 1.

[1] https://www.jcra.je/media/598302/t-011-wholesale-broadband-access-services-price-review-draft-decision.pdf
[2] Frontier Economics is a microeconomics consultancy with extensive experience in supporting price reviews and carrying out fixed network modelling across multiple jurisdictions.
[3] SMP is generally held to be equivalent to the concept of dominance under the Competition (Jersey) Law 2005.
[4] Note a Frontier report was also issued alongside the Draft Decision (JCRA 21/02). For the avoidance of doubt, the references in this report to the Frontier Report are to the updated report (JCRA 21/23), unless specifically described as relating to the 'Frontier report on proposals'.

Figure 1: Overview of the Final Decision

Element	Final Decision	Further detail
The appropriate set of wholesale broadband access services	Wholesale bitstream	Section 3
The appropriate regulatory pricing approach – cost orientation v ex-ante margin squeeze	Cost orientation	Section 4 (Cost orientation v ex-ante margin squeeze test)
The appropriate regulatory pricing approach – approach to modelling cost-orientated prices	Top-down model which includes adjustments for efficiency and to capture changes in asset valuation over time	Section 4 (Approach to modelling cost oriented prices)
Model scope - Service scope	Wholesale broadband (bitstream), and all other JT services provided using the same network / cost elements	Section 5 (Model scope)
Model scope - Network scope	The existing JT FTTP network as of June 2020	Section 5 (Model scope)
Model scope - Costs considered	Network capital costs (including site infrastructure), updated network operating costs and wholesaling costs, excluding High Risk Vendor (**HRV**) costs	Section 5 (Model scope)
Model scope - Time period	Five years, 2021/22 - 2025/26	Section 5 (Model scope)
Model scope – Price base	Nominal	Section 5 (Model scope)
Model methodological choices - Model type, cost standard and asset valuation method	Top-Down, Fully Allocated Cost , Current Cost Accounting	Section 5 (Model methodological choices)
Model methodological choices - Capital cost annualisation approach	Legacy assets: Regulatory Asset Base approach, with holding gain adjustment Newly built assets: tilted annuity reflecting asset price trends	Section 5 (Model methodological choices)
Model methodological choices - Efficiency adjustments	Opex trends reflect inflation and efficiency gains of 2.5% per annum	Section 5 (Model methodological choices)
Cost of capital	8.7% (pre-tax nominal)	Section 5 (Cost of capital)
Charging approach (fixed fee versus two-part tariff)	Fixed fee, further a line rental service is necessary for the OLO to avail itself of the wholesale bitstream service and prices calculated reflect the price of bitstream and wholesale line rental	Section 5 (Charging approach)
Pricing under the fixed fee approach	2021/22 – £27.94 subscriber/month 2022/23 – £26.95 subscriber/month 2023/24 – £26.06 subscriber/month 2024/25 – £25.25 subscriber/month 2025/26 – £24.51 subscriber/month	Section 5 (Pricing under a fixed fee approach)

	Where each price control period reflects the 12-month period from 1 October to 30 September	
Approach to other charges	No change to one-off charges Safeguard cap (current level of prices (in nominal terms)) applied to CP Broadband Interconnection charges until completion of business connectivity market review	Section 5 (Approach to other charges)

1.6 As shown in the Figure, the maximum price (for wholesale bitstream and wholesale line rental (**WLR**)) calculated is lower than the current price and this reduction is forecast to increase over time. In the first year of the control, 2021/22, the maximum price per subscriber per month is £27.94 and this falls to £24.51 per-subscriber per month in the final year of the control, 2025/26. Over the five year control, the average[5] monthly per-subscriber price over the period is £26.12, compared to the current price of £31.25, a saving of over £5 a month, or £60 over a year.

1.7 This price reduction should result in greater competition between licensed operators which in turn should deliver greater choice and lower retail prices to consumers, with significant positive externalities for the wider Jersey economy. The approach adopted ensures JT is able to recover its efficiently incurred costs and is incentivised to continue to maintain and invest in its network. Further detail on the impact of the Decision is set out in Section 6.

1.8 While this Final Decision is the final step of the non-statutory process, before carrying out certain regulatory functions, the appropriate Jersey statutory process must be followed. A decision to regulate the prices an undertaking can charge is the exercise of a specified regulatory function pursuant to the Telecommunications (Jersey) Law 2002. Therefore the statutory process, in the form of an Initial Notice, has been issued alongside this Final Decision and this marks the next step in the price review.

[5] Weighted to reflect the expected number of JT broadband lines in each year of the price control.

2 Introduction

2.1 This section is split into three subsections, which cover in turn:

- Background (see paragraphs 2.2 to 2.5);
- The price review process (see paragraphs 2.6 to 2.9); and
- Structure of this document (see paragraphs 2.10 to 2.12).

Background

2.2 At the start of the price review, in July 2020, the Authority held briefing sessions with licensed operators active in the provision of broadband services in Jersey. It also issued a call for information to JT to inform the modelling carried out by Frontier Economics, and to OLOs to understand future demand for wholesale access to JT's FTTP network. Subsequently, in October 2020, the Authority issued an Information Note,[6] providing more detail on the approach to this price review.

2.3 In line with the timetable set out in the Information Note, in January 2021, the Authority published a Draft Decision. In the Draft Decision and accompanying Frontier report on the Authority's proposals (**Frontier report on proposals**),[7] the Authority set out its preliminary views on:

- The appropriate set of wholesale broadband access services;
- The appropriate regulatory pricing approach;
- The appropriate price for the relevant services; and
- The impact of the proposals.

2.4 Five responses were received to the Draft Decision from Airtel-Vodafone, Clear Mobitel, Homenet, JT and Sure. Non-confidential versions of these responses are available on the Authority's website and the Authority would like to thank all stakeholders for their input.

2.5 As part of the Consultation process, follow-up discussions and information requests were sent to JT. This was to capture additional information which the Authority required to address matters raised by JT in their response, namely around the costs considered in the model. This is discussed further in section 5 (Model scope).

The price review process

2.6 The Authority's approach to consultations was set out in an Information Note in July 2018.[8] The Information Note outlines the process to be undertaken before carrying out certain regulatory functions in accordance with the relevant statutory process.

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[6] Information Note - Wholesale Broadband Access Services: Price Review: https://www.jcra.je/cases/2020/t-011-wholesale-broadband-access-services-price-review/information-note-wholesale-broadband-access-services-price-review/

[7] https://www.jcra.je/media/598303/t-011-wholesale-broadband-access-services-price-review-frontier-economics-report.pdf

[8] https://www.gcra.gg/media/597858/g1369gj-regulatory-consultation-process-information-note.pdf

2.7 Under the process there is first a non-statutory process. The non-statutory process consists of a Call for Information, a Draft Decision and a Final Decision. For this price review, a call for information was held in the summer of 2020 and the Draft Decision was issued on 27 January 2021. The conclusion of this consultation process is presented in this document, the non-statutory Final Decision.

2.8 Before carrying out certain regulatory functions, following the non-statutory process the appropriate Jersey statutory process is followed. A decision to regulate the prices an undertaking can charge is the exercise of a specified regulatory function pursuant to the Telecommunications (Jersey) Law 2002. Therefore the statutory process, in the form of an Initial Notice, has to be followed and this has been issued alongside this Final Decision.

2.9 As set out in the Initial Notice, written representations to the exercise of this specified regulatory function may be made. If representations are received regarding the proposed exercise of such function, the Authority will consider them and will decide:

- not to exercise such function;
- to issue a new Initial Notice; or
- to issue a Final Notice confirming the direction.

Structure of this document

2.10 This document broadly follows the structure of the Draft Decision[9] and is organised as follows:

- The appropriate set of wholesale broadband access services (section 3);
- The appropriate regulatory pricing approach (section 4);
- The appropriate price for the relevant service (section 5);
- The Impact of the Decision (section 6); and
- Final Decision (section 7).

2.11 Within sections 3 to 6 a consistent approach is adopted to the different sub-sections, where each sub-section refers to an element of the Draft Decision, for example the approach to modelling cost-oriented prices. The structure is as follows:

- Draft Decision proposals;
- Draft Decision responses;
- Authority analysis; and
- Authority conclusion.

Section 7 then brings together the conclusions of sections 3 to 6 in the form of a Final Decision.

2.12 Note, in the interest of brevity, this document does not repeat all the reasoning for proposals set out in the Draft Decision and Frontier Report, though a high level summary is provided within each section and cross-reference is made to the Frontier Report where relevant.

[9] The Draft Decision included a Legal and licensing framework annex, this material has been incorporated into the Initial Notice published alongside this document and has not been duplicated in this document.

3 The appropriate set of wholesale broadband access services

3.1 This section refers to section 4 of the Draft Decision where the proposed product/s within the scope of the price review was set out.

Draft Decision proposals

3.2 The Draft Decision noted that currently OLOs have access to two sets of wholesale broadband access services, both provided using the same network elements: wholesale access products and wholesale bitstream products. Wholesale access products have defined speed and quality of service characteristics (e.g. set download speeds and contention ratios). In contrast, wholesale bitstream enables OLOs to self-manage their customers' needs in relation to speed, contention and quality of service.

3.3 It was noted the review would only include wholesale bitstream products (i.e. no regulated prices would be set for wholesale access products) as:

- OLO demand is focused on the wholesale bitstream product;
- The bitstream product offers greater flexibility to OLOs than wholesale access products; and
- The flexibility of the bitstream product better supports the Government's objective of encouraging differentiated retail services.

3.4 Question 1 of the Draft Decision sought respondents' views on the appropriate set of wholesale broadband access services.

Draft Decision responses

3.5 All respondents agreed the scope of the control should be the wholesale bitstream product. Clear Mobitel noted it was the most flexible product and this was echoed by Airtel-Vodafone. Homenet noted agreement in principle and that this builds on the previous bitstream process run by CICRA. Sure noted it had already migrated away from wholesale access products to the bitstream product and its view was that the wholesale access products are likely to be withdrawn by JT. JT's view was all retail service providers purchase bitstream and therefore only bitstream should be in the scope of the control.

Authority analysis

3.6 The Authority notes there was consensus on the proposed approach.

Further information:
Frontier Report, section 2 (The appropriate set of wholesale broadband products in Jersey)

Authority conclusion

3.7 In light of the analysis in the Draft Decision and stakeholder responses, the Authority has decided that the appropriate scope of the review is the wholesale bitstream service. This is currently in the market and being used by OLOs. No changes to the technical definition of this product have been made[10] and consistent with the current product in the market, as set out in section 5, "Pricing under the fixed fee approach", a line rental service is necessary for the OLO to avail itself of the wholesale bitstream service. For the purposes of the control, the formal definition is set out in the Initial Notice which has been issued alongside this Final Decision.

[10] The current product is a 1Gbit/s bitstream product which came into effect on 28 July 2020. The Licence Condition 33 notice, dated 15 June 2020 issued before this product launched, notes "*JT will introduce a 1Gbps internet access port that enables the OLO to provide internet access over Ethernet FTTP technologies to end users in Jersey. A line rental service is necessary to avail of the wholesale Bitstream service. The line rental service can be a Wholesale Line Rental (WLR) service from the service provider procuring the Bitstream service or an alternative service provider as long as a landline service is in place in the end-user premises that wishes to procure the Bitstream service.*"

4 The appropriate regulatory pricing approach

4.1 This section refers to section 5 of the Draft Decision where the Authority set out its preliminary conclusions on the appropriate regulatory pricing approach and is split into two sub-sections:

- Cost orientation v ex-ante margin squeeze test (see paragraphs 4.2 to 4.11); and
- Approach to modelling cost oriented prices (see paragraphs 4.12 to 4.20).

Cost orientation v ex-ante margin squeeze test

Draft Decision proposals

4.2 The Draft Decision discussed the relative merits of cost orientation[11] versus an ex-ante margin squeeze test.[12] It set out proposals to adopt cost oriented wholesale pricing based on this approach being best suited to the Jersey market, which has:

- A fully deployed FTTP network with predictable costs and demand;
- Government policy that does not seek to encourage network competition; and
- A lack of external price constraints, for example an alternative high-speed broadband network.

4.3 It was noted that while an ex-ante margin squeeze test is not needed going forward, the Authority will continue to have the power under Jersey Competition Law[13] to investigate whether JT engages in margin squeeze on an ex-post basis. This will help ensure compliance and provides the Authority with the ability to investigate potential margin squeeze behaviours without prices being set on the basis of formal ex-ante tests.

4.4 Question 2 of the Draft Decision sought respondents' views on setting prices on a cost orientation basis versus using an ex-ante margin squeeze test.

Draft Decision responses

4.5 All respondents agreed with the principle of setting prices based on cost orientation rather than an ex-ante margin squeeze test. JT highlighted whilst it considered both approaches to setting prices to be valid, the Authority has already produced a cost model to determine cost-based prices during the consultation process, whereas it has not updated its ex-ante model. Recognising that significantly less time and effort would be required to set prices according to a cost oriented approach, JT agreed with the Authority's proposal. Similarly, Clear Mobitel added it did not consider the exercise of conducting ex-ante tests to be an efficient use of the Authority's resources.

[11] Under cost orientation, wholesale prices are set on the basis of the cost of providing the service. This approach ensures an SMP operator can recover efficiently incurred costs and receive an appropriate return on their invested capital.

[12] Under an ex-ante margin squeeze test, the wholesale price is not regulated directly. However, there is an assessment whether OLOs, as access seekers, can profitably replicate the retail broadband offers of the SMP operator, given the level of wholesale prices charged by the SMP operator.

[13] See Article 26 at https://www.jerseylaw.je/laws/revised/Pages/05.070.aspx

4.6 Sure's response specifically cited the Authority's rationale, pointing in particular to the fact that the FTTP network in Jersey is fully deployed and to the Government's focus on access-based, rather than infrastructure-based, competition.

4.7 Homenet objected to a margin squeeze based approach on the basis that the resultant prices would not be suitable for the Authority to achieve effective competition in the market, suggesting such an approach would not create a level playing field. Airtel-Vodafone agreed that prices should be set on the basis of cost orientation, but requested further clarification from the Authority as to the steps that would be taken to ensure JT does not commit a margin squeeze in relation to the bitstream product, in the absence of an ex-ante test.

Authority analysis

4.8 The Authority notes there was consensus on the proposed approach.

4.9 Homenet did not explain why it considers a retail-minus approach would not be suitable to encourage competition, although its reference to a level playing field suggests it may not believe that prices based on a margin squeeze exercise would sufficiently account for the smaller scale of OLOs relative to JT. Nevertheless, the adoption of a cost orientated approach should address any potential concerns in this area, as under this approach prices are set as close as possible to the costs of provision including a reasonable return on investment. This is the outcome that would be expected in an effectively competitive market.

4.10 In response to Airtel-Vodafone's concern around potential margin squeeze, the Authority notes that JT continues to have an obligation not to commit a margin squeeze, as specified in Jersey Competition Law and JT's Licence. The recent fine issued to JT by the Authority in relation to a margin squeeze investigation further highlights the Authority's ability to investigate and prosecute margin squeeze cases.[14] Further, the Authority notes the approach is fully consistent with regulatory precedent, for example when Ofcom introduced cost orientated charges for Openreach with respect to superfast broadband, it removed the ex-ante margin squeeze test.

Further information:
Frontier Report, section 3.1 (Cost orientation vs. margin squeeze test)

Authority conclusion

4.11 In light of the analysis in the Draft Decision and stakeholder responses, the Authority has decided the appropriate approach is to set prices based on cost orientation. The Authority further considers that Competition Law and licence conditions provide sufficient protection to OLOs from the threat of margin squeeze in the absence of prices being based on an ex-ante test.

[14] Final Notice available at https://www.jcra.je/media/598260/final-notice-of-a-direction-to-jt-jersey-limited.pdf

Approach to modelling cost oriented prices

Draft Decision proposals

4.12 The Draft Decision discussed the relative merits of a top-down versus bottom-up approach[15] to modelling cost oriented prices. Taking into account regulation precedent and guidelines, including European Commission (**EC**) recommendations on regulated access to Next Generation Access (**NGA**) networks (2010), the proposed approach was to adopt a top-down approach given:

- Government policy does not seek to encourage network competition;
- There is a fully deployed FTTP network with predictable/known costs and demand; and
- The market is relatively small which means a top-down model is more proportionate.

4.13 Within the top-down approach, adjustments were proposed to ensure JT recovers an efficient level of costs, this includes adjustments for efficiency and to capture changes in asset valuation over time.

4.14 Question 3 of the Draft Decision sought respondents' views on using a top-down approach to modelling cost oriented prices.

Draft Decision responses

4.15 All respondents agreed a top-down approach is appropriate for modelling cost oriented prices for the wholesale bitstream product in Jersey. Homenet and Sure highlighted the importance of adjusting costs to reflect potential inefficiencies in JT's network, with Sure adding that changes in asset values over time should also be reflected in the Authority's approach.

4.16 Airtel-Vodafone outlined, in response to the question on the cost oriented price modelling approach, its views in relation to the services covered by the charges. These views are described and discussed in Section 5 of this document under the appropriate headings.

Authority analysis

4.17 The Authority notes there was consensus on the proposed approach.

4.18 In response to the concerns raised by Homenet and Sure around efficiency adjustments, the Authority notes that such adjustments have indeed been taken into consideration in the setting of cost oriented prices. The Authority has scrutinised the costs submitted by JT in great detail and engaged in several rounds of clarification with JT to ensure costs allocated to wholesale broadband services are appropriate and reflective of efficient costs. The approach to accounting for efficiency improvements over time is described in Annex A of the Frontier Report.

4.19 Regarding Sure's comment on the importance of reflecting changes in asset values over time, the Authority notes that this consideration is also reflected in the approach taken by the Authority, as set out in Annex A of the Frontier Report.

[15] A top-down approach models the existing network of the SMP operator, with the cost-based price reflecting the actual costs incurred by the SMP operator in building and maintaining the network. A bottom-up approach models the network of a hypothetical operator that would be required to serve forecast demand.

Further information:

Frontier Report, section 3.2 (Implementing cost-orientation)

Authority conclusion

4.20 In light of the analysis in the Draft Decision and stakeholder responses, the Authority has decided a top-down approach, which includes adjustments for efficiency and to capture changes in asset valuation over time, is appropriate.

5 The appropriate price for the relevant services

5.1 This section refers to section 6 of the Draft Decision where the Authority set out its preliminary conclusions on the specification of the cost model, prices under the two proposed charging approaches and proposed approach to other charges.

5.2 In light of the substantial comments received on this area, this section is split into six subsections, which cover in turn:

- Model scope (see paragraphs 5.4 to 5.30); and
- Model methodological choices (see paragraphs 5.31 to 5.56);
- Cost of capital (see paragraphs 5.57 to 5.66);
- Charging approach (see paragraphs 5.67 to 5.80);
- Pricing under the fixed fee approach (see paragraphs 5.81 to 5.90); and
- Approach to other charges (see paragraphs 5.91 to 5.105).

5.3 Question 3 of the Draft Decision sought respondents' views on bullets one to three, whilst Questions 5 and 6 covered bullet four and five. Question 7 invited views on bullet six.

Model scope

<u>Draft Decision proposals</u>

5.4 The Draft Decision set out the purpose of the cost model which is to estimate cost-based monthly rental prices for JT's wholesale bitstream product over a five year period. The key proposals with respect to model scope are set out in Figure 2 below.

Figure 2: Overview of proposed model scope

Element	Proposed approach
Service scope	Wholesale broadband (bitstream), and all other JT services provided using the same network / cost elements (fixed voice, leased lines, retail and mobile services)
Network scope	The existing JT FTTP network as of June 2020 (does not reflect the additional cost of serving new-build premises, or demand from these premises)
Costs considered	Network capital costs (e.g. FTTP access network, buildings), network operating costs (e.g. repair and maintenance, service platform costs) and wholesaling costs (e.g. JT wholesaling team). Does not include potential cost of replacing assets from HRVs
Time period	2021 - 2025, a 5-year period consistent with the EC recommendations. Provides longer-term regulatory certainty, to support both investment in the fibre network and competition in the retail market

<u>Draft Decision responses</u>

5.5 This section summarises responses on:

- Service scope (see paragraph 5.6);
- Network scope (see paragraph 5.7);
- Costs considered – capital costs (see paragraphs 5.8 to 5.10);
- Costs considered – operating costs (see paragraph 5.11); and

- Time period (see paragraph 5.12).

Service scope

5.6 No respondents objected to the Authority's proposed service scope, although Sure requested further information on the allocation of common costs between bitstream services and other services such as leased lines.

Network scope

5.7 No respondents objected to the Authority's proposed network scope. JT cautioned that the average cost to serve may increase as new-build premises are built, but agreed the proposed approach was proportionate.

Costs considered – capital costs

5.8 Airtel-Vodafone stressed that HRV replacement capital costs should be excluded from the model. JT expressed concern around the absence of a mechanism within the price control for potential recovery of relevant HRV costs in future.

5.9 JT also made the Authority aware of capital costs for additional equipment not previously considered, reflecting site infrastructure which supports the provision of the wholesale bitstream product. This category reflects the cost of assets such as generators and power equipment.

5.10 Airtel-Vodafone also requested clarification as to how Government grants received by JT, for the purposes of supporting fibre rollout, have been considered in the model.

Costs considered – operating costs

5.11 No respondents objected to the operating costs that the Authority proposed to consider in the model. However, after reviewing the Draft Decision, JT identified additional operating costs which it did not submit during the initial stage of the data collection exercise. As a result, the Authority has engaged in extensive discussions with JT since the Draft Decision was published to ensure the operating cost allocation is reflective of all relevant efficient costs of service provision. This is discussed further below under Authority analysis.

Time period

5.12 No respondents objected to the five-year time period for the price control. However, Sure suggested the relevant time period for modelling the costs should be 2022 – 2026, given that at least part of 2021 will have passed when the new pricing is introduced.

<u>Authority analysis</u>

5.13 This section provides the Authority's analysis on:

- Service scope (see paragraph 5.14);
- Network scope (see paragraph 5.15);
- Costs considered – capital costs (see paragraphs 5.16 to 5.22);
- Costs considered – operating costs (see paragraphs 5.23 to 5.27);
- Time period (see paragraphs 5.28 to 5.29).

Service scope

5.14 The Authority considers the service scope set out in the Draft Decision remains appropriate. In response to Sure's clarification relating to cost allocation between services, the Authority refers Sure to Annex A of the Frontier Report, which provides a detailed description of the methodology. Further discussion of common costs is also provided later in this section under the heading "Costs considered – operating costs".

Network scope

5.15 Consistent with the responses to the Draft Decision, the Authority has maintained the same approach to network scope, as set out in the Draft Decision i.e. new-build premises are not modelled. In particular, the Authority notes JT's overall agreement with the proportionality of the overall approach. In response to JT's concern regarding the average cost to serve new-build premises, the Authority points JT to Annex A of the Frontier Report where it sets out the rationale for the assumptions that (a) new-build premises are likely to be less costly to serve than the average existing premise and (b) the impact of taking new-build premises into account is likely to be minimal.

Costs considered – capital costs

5.16 The Authority does not consider it appropriate to modify the set of capital costs considered, as set out in the Draft Decision, except for the inclusion of site infrastructure capex as noted below.

5.17 In response to Airtel-Vodafone's concern regarding HRV costs, the Authority refers to Annex A of the Frontier Report, where it is noted these costs are excluded and the rationale for their exclusion from the model is explained.

5.18 With respect to JT's concern around future HRV costs, the Authority notes it is not possible to estimate the additional costs JT may incur as a result of any policy regarding HRVs and JT has not supplied any information of the potential scope of them. Further it is unclear how the costs will be recovered and the scope of costs that should be recovered from Broadband, rather than from other services, such as mobile for example. Given this, the approach as set out in the Draft Decision, to consider how these costs are accounted for when the relevant policy decisions are made, still holds.

5.19 With respect to Airtel-Vodafone's query on treatment of Government support, the Authority notes the prices set do not allow JT to recover more than the amount JT has invested into the provision of wholesale broadband access services, plus JT's required return on investment (**WACC**) (i.e., reflected by the WACC). To the extent that Government support allowed JT to deploy the network at a lower cost than it would have incurred otherwise, this will be reflected in lower charges for OLOs on a forward looking basis. Reflecting this, for the purposes of this price review, the Authority has not carried out any analysis of Government support.

5.20 As a general point in response to comments regarding how the Authority has adjusted the cost data provided by JT, the Authority would like to clarify that no explicit adjustments have been made to the absolute base levels of capex used as an input to the model. Overall, it is difficult to benchmark the capital costs associated with JT's FTTP rollout, since it is difficult to find benchmark countries that are similar in size and other characteristics which are also at a comparable stage of FTTP rollout.

5.21 However, as part of its assessment, the Authority undertook a comparison of capital costs in Jersey and in the UK, comparing differences in geographical characteristics (for example, population density) and in labour costs. Although this analysis found capital costs are higher on a per-premise basis in Jersey the difference was within a range which could be explained by Jersey-specific factors. Namely, as Jersey is less dense with higher labour costs and stricter planning rules which increase the overall cost of rollout. This analysis further supported the approach of not adjusting JT's capital costs.

5.22 With regard to the site infrastructure capital costs provided by JT, the Authority has assessed the information provided in detail and agreed to include the relevant costs. The rationale for this is that the underlying assets support the provision of the wholesale bitstream product by powering the FTTP equipment in JT's exchanges. The Authority notes only a share of this has been included, reflecting that these assets support not only bitstream, but also mobile services and other fixed services. The Authority's approach to assessing the relevant costs to allocate is described in more detail in the Frontier Report.

Costs considered – operating costs

5.23 As noted under 'Draft Decision responses' above, the Authority has engaged extensively with JT to understand the appropriate allocation of operating costs for the purposes of this price review. This represents a continuation of the Authority's robust approach to ensuring the costs included in the model are appropriate, having undertaken an initial stage of this exercise before proposing the prices in the Draft Decision. It would clearly be inappropriate to take the costs submitted by JT at face value and so the Authority has, supported by Frontier Economics, challenged each element of JT's submission.

5.24 Following the publication of the Draft Decision, JT made an additional submission to the Authority regarding operating costs, in particular outlining additional cost categories which were not included in JT's response to the Authority's initial data requests. These costs included common costs, as well as other costs such as the operating costs associated with JT's exchange buildings and site infrastructure. Therefore, to respond to Sure's concern around the allocation of common costs, the consultation prices did not accurately reflect common costs.

5.25 Following this exercise, the Authority has updated the allocation of operating costs in the model underpinning the prices in the Draft Decision, including having scrutinised in depth the new common cost information provided. These adjustments, as well as a more detailed explanation of how the Authority has identified the appropriate levels of operating costs to include in the model, are explained in detail in the Frontier Report.

5.26 As a result of the submission of additional information, the base year for operating costs has been changed from a set year (2019 in the Draft Decision), to the use of a three year average (2017-2020). The Authority considers the use of the average provides a firmer foundation for the five year control as:

- JT's operating costs vary year-on-year within each category, meaning costs in an individual year are unlikely to be representative of an "average year"; and
- Taking an average over a larger number of years is likely to be more accurate than over two or three years, as it means the estimate is less impacted by specific one-off events that impact costs in a given year.

5.27 The Authority notes the requirement to carry out the detailed in-depth review of JT's additional submission set out above was not anticipated. Rather, it was expected that JT should fully understand all costs included with specific products, both wholesale and retail, and this information should have been submitted as part of the Authority's initial data requests which informed the Draft Decision proposals. While the Authority notes JT's full cooperation in providing the data and responding to subsequent queries, its dissatisfaction with the information provided has been made clear in correspondence to JT. Further follow up work to avoid this scenario happening again will take place after the completion of this price review. The intention is for this to form part of the Authority's 2022 Business Plan.

Time period

5.28 In response to Sure's suggestion in relation to the appropriate time period, the Authority notes that the calendar-year financial information used to determine prices does not fully align with the price control periods which, given the time required to complete the Jersey statutory process, will run from 1 October to 30 September each year.

5.29 In order to account for this, the Authority has derived prices which reflect a pro-rata weighting between the calendar-year prices, while maintaining the five-year control period. For example, the price for the period 1 October 2021 to 30 September 2022 is a weighting of 25% of the 2021 price and 75% of the 2022 price. This is reflected in the prices for each period of the price control.

Further information:
Frontier Report, Annex A (Cost model overview)

<u>Authority conclusion</u>

5.30 In light of the analysis in the Draft Decision and stakeholder responses set out above and in the Frontier Report, the Authority's final positions on the appropriate model scope are summarised in Figure 3 below. The changes to the Authority's approach comprise an updated assessment of cost data in light of the new information supplied by JT and the pro-rating of prices to reflect the period covered by the price control.

Figure 3: Final positions on model scope

Element	Approach
Service scope	Wholesale broadband (bitstream), and all other JT services provided using the same network / cost elements (fixed voice, leased lines, retail and mobile services)
Network scope	The existing JT FTTP network as of June 2020 (does not reflect the additional cost of serving new-build premises, or demand from these premises)
Costs considered	Network capital costs (e.g. FTTP access network, buildings, site infrastructure), updated network operating costs and wholesaling costs (e.g. repair and maintenance, service platform costs, regulatory costs, common costs). Does not include potential cost of replacing assets from HRVs
Time period	2021/22 - 2025/26, a 5-year period consistent with the EC recommendations. Provides longer-term regulatory certainty, to support both investment in the fibre network and competition in the retail market

Model methodological choices

<u>Draft Decision proposals</u>

5.31 The Draft Decision explained the proposed approach takes into account international best practice in the development of cost models, including the recommended costing approach outlined in the EC's 2013 Costing Recommendation. While drawing on this precedent, the approach was tailored to the specific market situation in Jersey and applied proportionately, as set out in Figure 4 below.

Figure 4: Overview of proposed model methodological choices

Element	Proposed approach
Price base	Nominal (cost trends are inclusive of expected inflation)
Model type, cost standard and asset valuation method	Top-down, Fully Allocated Costs (**FAC**), Current Cost Accounting (**CCA**)
Capital cost annualisation approach	Non-replicable assets (e.g. ducts): Regulatory asset base-type (**RAB**) approach, with holding gain adjustment Replicable assets (e.g. fibre cables): tilted annuity reflecting asset price and demand trends
Efficiency adjustments	Opex trends reflect inflation and efficiency gains of 4.5% per annum

<u>Draft Decision responses</u>

5.32 This section summarises responses on:

- Price base (see paragraph 5.33);
- Model type, cost standard and asset valuation method (see paragraphs 5.34 to 5.35);
- Capital cost annualisation approach (see paragraphs 5.36 to 5.38); and
- Efficiency adjustments (see paragraph 5.39).

Price base

5.33 Only JT submitted a view on the use of a nominal price base. It stated that it will be important to use realistic input cost inflation estimates and submitted supporting data. JT also suggested labour costs are likely to increase at a higher rate than general inflation, but did not support this claim with any evidence.

Model type, cost standard and asset valuation method

5.34 No respondents objected to the model type, cost standard or asset valuation method proposed by the Authority, with the exception of Clear Mobitel, which suggested that JT's legacy infrastructure should be considered as sunk assets given their age.

5.35 Sure questioned whether CCA adjustments could potentially be complex for some non-replicable assets, but noted that this treatment is consistent with the Authority's previous regulatory requirements.

Capital cost annualisation approach

5.36 Respondents made a number of comments with regard to the annualisation approach applied to capital costs in the model, but overall agreed that a mix of tilted annuity and RAB-style approaches was suitable.

5.37 JT disputed the Authority's treatment of fibre and drop wires as being replicable, on the basis that (a) it does not consider there is a prospect of an operator other than JT replicating an FTTP network and (b) Government policy is not focused on infrastructure competition.

5.38 Both JT and Sure highlighted an issue with the implementation of the demand tilt in the annuity approach proposed in the Draft Decision, and Sure provided a suggested formula to correct for the issue it observed. In addition, Sure commented that it was unsure as to the rationale for applying a tilted annuity approach to recovery of some costs.

Efficiency adjustments

5.39 JT argued the efficiency adjustments of 4.5% per annum used in the model are too high. JT argued that the Ofcom model used to inform the 4.5% value was based on OpenReach's copper network, and therefore argued that this estimate includes both "catch-up" and "frontier" efficiencies. JT also refer to efficiency gain assumptions used in Ofcom's fibre cost model built as part of its Wholesale Fixed Telecoms Market Review (**WFTMR**) Consultation, and state that efficiency gains were only applied to a narrow set of operating costs (SLG, system and processing costs). JT also pointed to Multifactor Productivity (**MFP**) estimates produced by the UK Office of National Statistics (**ONS**), which estimate an annual efficiency gain of 0.7% for the UK economy as a whole and 0.3% for specific sectors, including utilities.

<u>Authority analysis</u>

5.40 This section provides the Authority's analysis on:

- Price base (see paragraphs 5.41 to 5.43);
- Model type, cost standard and asset valuation method (see paragraphs 5.44 to 5.45);
- Capital cost annualisation approach (see paragraphs 5.46 to 5.51); and
- Efficiency adjustments (see paragraphs 5.52 to 5.55).

Price base

5.41 The Authority has assessed the information provided by JT in relation to input cost inflation and does not consider this changes its conclusions. The Authority notes that in order for the model to estimate the efficient level of costs, the cost trends used should represent the expected trends in costs which would be faced by an efficient operator.

5.42 Regarding capital cost trends, the Authority notes the cost trends used in the model reflect those used in regulatory cost models built in other jurisdictions, as described in the Frontier Report. These models aim to model the cost of an efficient operator, meaning the cost trends used in them would be expected to reflect efficient cost trends. However, the cost trends and their direction suggested by JT do not follow the trends used in the Authority's model, as shown in Figure 5 below. Therefore, the Authority remains of the view that the cost trends used in the model, which have been informed using other regulatory cost models, are a better reflection of the trends for an efficient operator.

Figure 5: Comparison of direction of input cost inflation trends

Network component	Direction of trend used in Authority model (% p.a.)	Direction of trend suggested by JT in its response (% p.a.)
Fibre cable (drop)	–	+
Core router	–	+
ONT	+	–

Note: The annualised trends proposed by JT, presented above, may differ slightly to those submitted by JT. This is because the Authority has annualised the trends using a compound growth approach.

5.43 In relation to JT's claim that labour costs are likely to increase above the rate of inflation, the Authority notes that analysis by Statistics Jersey shows wage growth over both a 5-year and 20-year period has been in line with inflation.[16] As such, the Authority considers that its use of Jersey RPI to inform the trend in operating costs remains appropriate.

Model type, cost standard and asset valuation method

5.44 In response to Clear Mobitel's suggestion that legacy assets should be treated as sunk, the Authority notes its model already takes into account the fact that legacy assets such as ducts are heavily depreciated, with the RAB-style approach for these assets ensuring costs are not over-recovered.

5.45 The Authority notes Sure's comments in relation to the implementation of CCA to value assets. However, the Authority notes, as acknowledged by Sure, that the Authority has taken this approach historically. The Authority therefore considers it appropriate to continue with its proposed approach to using CCA.

Capital cost annualisation approach

5.46 With regard to JT's comment on the categorisation of assets, the Authority acknowledges that the assets for which the tilted annuity approach was applied (such as fibre cabling) should indeed be considered non-replicable, as the small size of Jersey means that JT's network is unlikely to be replicated by another operator.

5.47 However, the Authority wishes to clarify the rationale for its choice of annualisation approach for different asset categories. In determining the appropriate annualisation approach two sets of assets have been distinguished:

- "Legacy" assets, which were installed / built over a long period of time, have largely been depreciated and which have now been "re-used" for the JT FTTP network. These assets were referred to as "non-replicable" in the Consultation, i.e. categories

[16] See Table A1 in the annex at: https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/R%20Average%20Earnings%20June%202020%20report%2020200828%20SJ.pdf

"Ducts/Trench/Manholes/JB" and "Office buildings". These assets have now been re-labelled for clarity as "legacy" assets.[17]

- "Newly built assets" that were installed recently, such as equipment installed or upgraded as part of JT's FTTP roll-out (e.g. FTTP access cabling, core network equipment).These assets were previously referred to as "replicable", and now have been re-labelled for clarity as "newly built" assets.

5.48 For the legacy assets, it is appropriate for JT to only recover the remaining value of these assets, and hence a RAB-style approach was applied, while for the newly built assets it was reasonable to consider the efficient recovery of these costs over time. As explained in more detail in the Frontier Report, the "tilted annuity" approach results in an efficient recovery of costs, as it means a larger share of costs are recovered in years when the replacement cost of the assets is higher. Given this, our overarching annualisation approach for each asset category has not been changed.

5.49 The Authority notes the concerns expressed by JT and Sure regarding the tilted annuity approach, in particular that the inclusion of a "demand tilt" as part of the tilted annuity formula resulted in a profile of annualised costs that would not ensure the full recovery of JT's costs.

5.50 This feedback has been taken into account and the formula has been modified to remove the demand tilt element of the formula, such that the tilt is based solely on trends in asset prices.[18] The Authority considers a tilted annuity formula without the demand tilt still leads to an efficient profile of cost recovery, as a larger share of costs will be recovered in years when the replacement cost of the assets is higher, as it reflects asset price trends.

5.51 In response to Sure's concerns around the appropriateness of a tilted annuity approach, the Authority notes Annex A of the Frontier Report provides an explanation of the benefits of such an approach. The key benefit is that for relatively new assets, a tilted annuity approach provides a more stable forward-looking cost recovery profile which reflects changes in asset prices over time.

Efficiency adjustments

5.52 Regarding JT's position on the 4.5% estimate drawn from Ofcom's analysis of achievable efficiency gains for Openreach, the Authority disagrees with JT's position that this estimate includes both "catch-up" and "frontier" efficiencies. This is because the 4.5% reflects the network cost saving Openreach has achieved historically, and the Authority understands Openreach has achieved annual savings of this magnitude consistently over the past 10 years. Achieving cost savings consistently over such a long period is not consistent with the view these

[17] We note that some of the assets in these categories could be newly-built, e.g. potential duct replacements during JT's FTTP roll-out. However we understand that the proportion of these assets that are newly-built is small, and that it holds that the current set of these assets in JT's network have been built over a large number of years, and are generally heavily depreciated. As such, we consider the annualisation approach taken for these assets is appropriate.

[18] The Authority notes Sure provided a formula purporting to account correctly for the demand tilt. However, this would still not ensure the full recovery of JT's costs as that would require more granular information on asset values and projections of future demand than is currently available. In the absence of such detailed information, a decision has been taken to remove the demand tilt from the tilted annuity formula

savings are catch-up efficiencies. The Authority accepts, however, that the efficiencies estimate is based on Openreach's copper network, and that the expected efficiencies on a newer FTTP network such as that of JT are likely to be lower. The 4.5% estimate can therefore be considered an upper bound of the potential efficiency gains for JT.

5.53 The Authority also acknowledge JT's reference to the FTTP cost model developed by Ofcom as part of its WFTMR review, and that an updated version of this model produced as part of Ofcom's Final Decision is now available.[19] The Authority acknowledges that SLG, system and processing costs, to which a 3% efficiency gain is now considered in Ofcom's FTTP model, will represent a relatively small share of JT's costs. The Authority notes, however, that this does not capture all of the efficiency gains considered by Ofcom, as gains are also assumed for other elements of opex including repair and maintenance, power, and general management costs, which will represent a much bigger share of JT's costs.[20] Efficiency gains are also considered on some elements of capital costs.

5.54 The Authority notes the evidence provided on the ONS MFP estimates. Whilst recognising the drawbacks in this data, the Authority considers that the estimates could represent a reasonable proxy for efficiency gains.[21]

5.55 On balance, the Authority considers a lower efficiency gain estimate of 2.5% per annum is a suitable estimate, which is around the mid-point of JT's MFP measures (0.3% and 0.7%) and Ofcom's estimated efficiency gains of 4.5%. The Authority considers this a proportionate approach which is proportionate to the size of the jurisdiction. For example, it has not considered efficiency gains in relation to capital costs, as have been considered by Ofcom in its WFTMR review.

Further information: Frontier Report, Annex A (Cost model overview)

Authority conclusion

5.56 In light of the analysis in the Draft Decision and stakeholder responses set out above and in the Frontier Report, the Authority's final positions on the appropriate model methodological choices are summarised in Figure 6 below. The key changes relative to the Draft Decision are:

- the approach to the distinction between the two categories of assets for the purposes of annualisation approach has been clarified and the distinction is now between legacy assets and newly built assets;
- the demand tilt previously incorporated in the tilted annuity formula has also been removed; and

[19] See https://www.ofcom.org.uk/consultations-and-statements/category-1/2021-26-wholesale-fixed-telecoms-market-review

[20] These costs are calculated as a percentage of Gross Replacement Costs (GRC), and Ofcom considers annual efficiency gains of 1.5% to the GRC for Ducts and associated Civils, which is an important element of JT's FTTP network.

[21] On the one hand the Authority recognises such estimates will include both catch-up and frontier efficiencies, and that efficiencies on an FTTP network will be in principle largely driven by frontier efficiencies. However, measures such as MFP are also likely to underestimate the true level of potential efficiency gains, as efficiencies are not fully captured by changes in outputs which is the basis of an MPF calculation.

- the level of efficiency adjustments applied to JT's operating costs has been reduced from 4.5% to 2.5%.

Figure 6: Final positions on model methodological choices

Element	Approach
Price base	Nominal (cost trends are inclusive of expected inflation)
Model type, cost standard and asset valuation method	Top-down, Fully Allocated Costs (FAC), Current Cost Accounting (CCA)
Capital cost annualisation approach	Legacy assets (e.g. ducts): Regulatory asset base-type (RAB) approach, with holding gain adjustment Newly built assets (e.g. fibre cables): tilted annuity reflecting asset price trends
Efficiency adjustments	Opex trends reflect inflation and efficiency gains of 2.5% per annum

Cost of capital

<u>Draft Decision proposals</u>

5.57 The Authority reviewed JT's cost of capital (WACC) for the purpose of the price review. The cost of capital is the return JT, as the SMP operator, is allowed to make which would be consistent with returns that investors would be expected to make in a competitive market, subject to a given level of risk. The Authority proposed to use the Capital Asset Pricing Model (**CAPM**) to determine JT's WACC. This is consistent with the Authority's approach adopted in the past. The proposed WACC was set at 8.7% (pre-tax nominal).

<u>Draft Decision responses</u>

5.58 Three respondents commented on the WACC.

5.59 Clear Mobitel welcomed the change in WACC, noting it was the first change since 2008 and stating that the WACC used by the Authority "more closely reflects the SMP position of JT".

5.60 Sure noted the approach is in principle reasonable but queried why the Authority had not proposed to apply a differentiated WACC to replicable and non-replicable assets. It noted this approach had been adopted by Ofcom for BT and argued that the risk profile for non-replicable assets differs (potentially significantly) from the risk associated with assets used for contestable services. It further noted that as Jersey has a policy not to encourage infrastructure competition (in contrast to the UK approach), the difference in WACC between replicable and non-replicable assets should be higher than applied in the UK.

5.61 JT raised concerns with three adjustments that had been made to the WACC calculation, which it considered was not appropriate:

- Small company equity premium – JT noted it is significantly smaller than the water companies considered in setting the small company equity premium and argued that the risk associated with being a very small company should be reflected in a greater small company premium.

- Cost of debt – JT's view was this should be set at the level of interest paid on its current debt and that it was not appropriate to use inputs from the approach adopted in the UK water sector to inform this, in particular given differences in JT's size, risk and service offering.
- Point estimate within range – JT set out the following:
  - Given the importance of the telecommunications sector, its exposure to technological change and potential for innovation, the risks of setting the WACC too low are greater than the risks of setting the WACC too high. Therefore it is appropriate to aim up rather than using a midpoint in the estimated WACC.
  - The extent of full fibre rollout in Jersey makes JT unusual and has the effect of raising JT's fixed costs as a proportion of its total costs (relative to a scenario in which rollout is not as extensive), increasing JT's operational gearing. The concept of operational leverage from financial theory postulates that firms which have a greater proportion of fixed costs relative to variable costs are exposed to greater cyclicality in their earning and therefore have a higher asset beta and therefore WACC.
  - JT is concerned that the Authority should not abate the WACC because some investments are sunk, or because the States of Jersey is a shareholder in JT. Instead, JT argues that it is crucial the WACC provides a rational investor with a reasonable prospect of earning a normal return.

Authority analysis

5.62 The Authority recognises stakeholders' views diverge on this issue. Clear Mobitel and Sure in principle support the Authority's recommendation. However, Sure also recommends to estimate a separate WACC for JT's wholesale business (which mostly comprises non-replicable assets), with an expectation the WACC for the wholesale business would be lower than the WACC for JT overall. JT, on the other hand, argues that its WACC should be set higher.

5.63 On balance, the Authority considers that, for the reasons set out below, its initial recommendation is still appropriate.

5.64 The Authority agrees with Sure's comment in principle, but recognises that estimating a separate WACC for JT's wholesale business and JT's retail business (as Ofcom does for BT in the UK) would be disproportionate for a small jurisdiction. Therefore, the Authority does not propose to do it at this stage.

5.65 In response to JT's points, the Authority observes that:

- On the small company equity premium: the Authority's proposed approach is conservative as it includes a positive small company premium (up to 0.9%), although the empirical research suggests that "*there is insufficient evidence for an uplift based purely on the basis of size*"[22].

[22] PWC (2014) "Company specific adjustments to the WACC A report prepared for Ofwat" https://www.ofwat.gov.uk/wp-content/uploads/2015/10/rpt_com1408pwcuplift.pdf

- On cost of debt: JT's proposed approach of relying exclusively on the cost of JT's existing debt is inconsistent with the approaches taken by other regulators, in particular by Ofcom. Given JT's existing debt expires in 2022, it is appropriate to form a view on the cost of JT's future borrowing. JT's submission effectively implies that JT's cost of borrowing would remain at the same level as it was in 2012. This, however, is inconsistent with the observed trends, as the cost of borrowing has fallen significantly since 2012.
- Point estimate within range: the Authority continues to be of the view that 'aiming up' is not appropriate in these circumstances given the ranges for the underlying parameters have been estimated conservatively. While JT may have relatively high operational gearing, the lack of infrastructure based competition and regulation on a top-down RAB basis should reduce systematic risks faced by JT compared to some other comparators.

Further information:
Frontier Report, Annex B (High-level assessment of JT's cost of capital)

Authority conclusion

5.66 In light of the analysis in the Draft Decision and stakeholder responses set out above and in the Frontier Report, the Authority concludes the appropriate WACC for JT is 8.7% (pre-tax nominal).

Charging approach

Draft Decision proposals

5.67 The Authority consulted on two different approaches to charging for the wholesale bitstream element of the maximum price:

- **A fixed fee tariff**, under which the bitstream rental price is a single monthly charge per broadband subscriber that does not vary by bandwidth.
- **A two-part tariff** which would vary by bandwidth, comprising:
  - A fixed element, uniform across all customers and does not vary by speed or by data usage; and
  - A variable element based on data usage during busy hours.[23]

5.68 The Draft Decision noted the disadvantages and relative approaches of the two approaches. Although the two-part tariff may better support retail differentiation, it involves complexities with regard to JT's demand forecasts and OLOs' retail pricing strategies. The two-part tariff also increases the risk that JT will over- or under-recover its efficiently incurred costs.

5.69 The Authority noted only one approach would be implemented and Questions 5 and 6 of the Draft Decision sought respondents' views on the appropriate tariff structure.

Draft Decision responses

[23] Busy hour usage is when the network is most heavily used. Busy hour usage is used rather than overall data usage because busy hour usage is the key driver of network costs and because it varies by speed.

5.70 Respondents outlined a number of concerns with the two-part tariff approach. Both JT and Clear Mobitel considered that a fixed fee approach would be significantly more straightforward and pragmatic to implement than a two-part tariff.

5.71 Homenet expressed a view that under a two-part tariff, it would be difficult for OLOs to verify JT's (busy hour) data usage, which would be used to set the variable charge element. JT, Sure and Airtel-Vodafone also raised concerns around the calculation/collection of busy hour usage, and the associated charge, under a two-part tariff approach.

5.72 JT provided further reasons why it does not support a two-part tariff, noting such an approach is less cost-reflective than a fixed fee approach and alluding to implications for allocative efficiency and consumer welfare. It noted that the two-part tariff approach did not seem to have been proposed with any particular segment of the market in mind which might benefit from lower speed services which attract a lower price. Instead it suggested that the need to offer certain services universally (for example, socially beneficial services such as health and education) could be better addressed under a subsidised scheme based on an assessment of eligibility, rather than by introducing complexity to the overall structure of JT's wholesale charging model.

5.73 JT also suggested the costs of providing bitstream access to OLOs only varied with traffic to a limited extent. Sure made a similar point, noting that a fixed fee approach would be unlikely to result in all communications providers migrating their customers to the 1Gbps product, since OLOs faced more traffic sensitive costs than JT (for example, providers incur higher backhaul costs in the provision of higher-speed services e.g. through needing higher bandwidth CP Interconnect services). Sure claimed that the magnitude of these cost differences across speeds are sufficient to incentivise retail service providers to offer a range of speeds.

5.74 Sure echoed JT's observation around the greater degree of cost orientation under a fixed fee tariff. It also questioned the use of international precedent (Irish broadband pricing) to inform the fixed and variable pricing elements.

5.75 Conversely, there were concerns regarding the implications of the tariff structure for OLOs' ability to differentiate their service offerings by speed under a fixed fee approach. Further, Airtel-Vodafone argued that 50Mbps is sufficient for most retail broadband customers and argued that the implied tariffs for lower speed services were too high relative to the 1Gbps service under a two-part tariff approach, while Homenet stated their view on the importance of allowing for OLOs to offer lower speed services.

Authority analysis

5.76 The Authority has considered the arguments made by all respondents and concluded the additional complexity and risks arising from a two-part tariff are likely to exceed its potential benefits. In particular, it agrees with the observations put forward by respondents that a fixed fee tariff would be more straightforward to implement than a two-part tariff and that retail differentiation will still be enabled.

5.77 With respect to the two-part tariff, the Authority considers that its proposals and the accompanying Frontier report on proposals included a robust treatment of precedent and provided sufficient guidance around the measurement of data usage. However, respondents feedback highlighted material concerns around how the proposals could be implemented and the potential for unintended consequences, which have been taken into account in the decision to implement a fixed fee approach.

5.78 The key rationale for the potential introduction of a two-part tariff was to support the potential for retail differentiation, in particular, the ability to offer lower-speed retail services. The responses set out the concern that the fixed-fee approach would lead to all operators migrating to single 1Gbps product is likely to be overstated. This is because both customer demand and cost elements (other than the wholesale bitstream price) are expected to be sufficiently material to incentivise operators to offer different speeds at different price levels. Supporting this, respondents noted their plans to introduce products at different speeds and price levels, even under a fixed fee approach.

5.79 This approach is consistent with the Authority's prioritisation principles for deploying its limited resource.[24] Bearing these principles in mind, the Authority would not wish to introduce significant complexity and the potential for unintended consequences when positive outcomes can be achieved through the fixed fee tariff, which has the further benefits of being simpler and more cost-reflective than a two-part tariff.

Further information:
Frontier Report, section 4 (Cost-orientated prices for wholesale broadband products)

Authority conclusion

5.80 In light of the analysis in the Draft Decision and analysis of stakeholder responses set out above, the Authority has decided the appropriate charging approach for wholesale bitstream is a fixed fee. The two-part tariff approach will not be implemented.

Pricing under the fixed fee approach

Draft Decision proposals

5.81 The Draft Decision set out the structure of prices over the period 2021-25, in particular noting that the total charges (bitstream and WLR) would fall over the price control period. The drivers of price changes over time were also identified, namely a reduction in capital and operating costs over the period and a forecast increase in the broadband subscriber base over which those costs were expected to be recovered.

Draft Decision responses

5.82 Given the prices were not published in the Draft Decision, respondents did not comment on the level of prices. Instead, submissions focused on the role of WLR in the overall maximum price.

5.83 Airtel-Vodafone and Clear Mobitel expressed concern that customers should be able to buy broadband without a telephone line and therefore believed a bitstream charge exclusive of WLR should be offered.

5.84 Sure argued that since WLR is not a cost-based charge, nor is the total bitstream charge which includes a WLR element. However, Sure considered that since the products were bought

[24] JCRA (2021) "Prioritisation Principles"

together, this is not an issue. Sure also argued there is a risk JT might change the prices of individual components to its advantage, for example by increasing the price of WLR within the bundled price, and requested that the Authority provide further clarity in the Final Decision to avoid any 'loopholes'.

Authority analysis

5.85 Regarding the points made by Airtel-Vodafone and Clear Mobitel, the Authority would like to emphasise the review was focused on products currently offered in the market. Since bitstream is not currently offered separately to WLR, the Authority would need strong grounds to revisit the treatment of these services. Further any change to the product definition would likely materially extend the timetable of the review, which would delay the delivery of the benefits from it.

5.86 The Authority notes that in any case, the same fibre lines are used to provide a landline and broadband services. The cost of providing broadband services on a standalone basis would therefore not be significantly lower than the cost of providing broadband and landline services together. As a cost-reflective charge for the bitstream product alone (i.e. without WLR) would not be lower than the WLR charge plus the proposed additional charge for the bitstream product. In other words, if the WLR element were to be removed in order to offer a standalone bitstream service, the additional element of the charge would need to increase to ensure that all costs are recovered (given none of the costs would be recovered via the WLR element).

5.87 The Authority notes Sure's comment related to cost-based charging. However, the Authority wishes to emphasise that the overall 'maximum price' is based on the modelling exercise that reflects all relevant costs, which reflects the fact the products are bought as a bundle. Within this context, the bitstream element of the total price is simply the residual element once the WLR charge is removed from the total cost-based charge.

5.88 In response to Sure's concerns around JT's incentives to change the components of the maximum price (e.g. by increasing the WLR charge), the Authority notes that any changes in WLR would need to have a clear rationale and be notified in advance. This would allow both OLOs and the Authority to assess whether the change is appropriate. Further any increase in WLR would automatically lead to a reduction in the additional bitstream component, so that the total charge (WLR + bitstream additional component) does not exceed the calculated maximum price.

5.89 Notwithstanding the response set out above, the Authority notes the concerns raised about WLR and may consider this in more detail in future Business Plans.

Further information:

Frontier Report, section 4.2.2 (Proposed prices under the "Fixed fee" structure)

Authority conclusion

5.90 The Authority disagrees with the suggestions that OLOs should be able to offer customers broadband-only services by purchasing a standalone bitstream service from JT, without any WLR in place. In any case, a standalone bitstream service price would not be materially different from the overall bitstream charge set out below. The maximum monthly price for wholesale bitstream and WLR per-subscriber over the price control period are set out in Figure 7 below, with each price control period reflecting the 12-month period 1 October to 30 September.

Figure 7: Summary of the maximum price for wholesale bitstream and WLR: 2021/22 – 2025/26

Element	Unit	2021/22	2022/23	2023/24	2024/25	2025/26
Maximum price	£/subscriber/month	27.94	26.95	26.06	25.25	24.51

Approach to other charges

Draft Decision proposals

5.91 The Draft Decision explained there are two categories of charges faced by OLOs in addition to the rental price for wholesale broadband access services:

- **One-off charges** – These include connection charges, customer migration charges and change of speed charges.
- **CP Broadband Interconnection charges** – These are a type of leased line, which connect JT's network to an OLO's Point of Presence.

5.92 The Authority set out its view that one-off charges had been subject to review in the past and that some of those charges would no longer apply with wholesale bitstream (e.g. the change of speed charge).

5.93 It also noted CP Broadband Interconnection charges are set in line with prices of JT's wholesale leased line product, which are subject of the ongoing Business Connectivity Market Review (**BCMR**) process. As set out in section 5 of the Frontier report on proposals, the Authority recognised that it is appropriate to protect OLOs from price increases before the process is finalised. To achieve this, the Authority proposed a safeguard cap on these charges at the current level of prices (in nominal terms) in the transition period before the final remedies from the BCMR process are determined.

5.94 Question 7 of the Draft Decision sought respondents' views on the appropriate approach to other charges.

Draft Decision responses

5.95 Four respondents provided their views on the proposed approach to setting other charges.

5.96 JT agreed with the Authority's proposed approach and did not provide further comment.

5.97 Airtel-Vodafone stated that it wanted to see "full details of every line item of additional charges, and the rationale behind these costings", noting the Draft Decision made "limited reference … other than connection charges". It also expressed a concern that a lack of transparency around how any additional charges are set might run contrary to the objectives of the price controlled charges.

5.98 Homenet suggested any migration charges should be cost reflective, noting its view that the act of migrating a customer should be simple. Homenet noted that this should also applied to any changes relating to a change in the speed of service, but acknowledged that under the Authority's proposals, speeds would be controlled by the OLO. Homenet also stated "The CP interconnect should be priced according to the actual cost to provide as OLO's are paying for the services this is just access and or [sic] JCRA should state a cost Gig this needs to be min of 10Gig but be increased or decreased without penalties”

5.99 Sure noted that it considers JT’s current portfolio of CP Broadband Interconnection services to be inappropriate, highlighting that JT does not provide capacity options for services greater than 40 Gbps, despite Sure and JT Retail’s requirements exceeding this. Sure also noted JT’s recent announcement of its intention to introduce a 100Gbps variant of the service and requested that JT should be specifically required (by the Authority) to “provide such new active wholesale leased lines (within the CP Broadband Interconnection portfolio) as may be reasonably required by OLOs to support the optimisation of broadband efficient backhaul facilities.”

Authority analysis

5.100 The Authority is not proposing to change its approach to other charges set out in the Draft Decision. The key driver behind considering other charges was to ensure the benefits of the price review could not be diluted, while recognising significant work has been undertaken on them in the past. Further, the Authority’s approach also recognises that given concurrent market reviews, in particular the BCMR, it is important to ensure remedies are applied in the correct context.

5.101 With respect to Airtel-Vodafone’s concerns, the Authority notes one-off charges are set out in the relevant JT wholesale agreement so there is transparency for OLOs on those charges. Further, as noted in the Draft Decision, a number of these charges have been subject to casework in the past, and no evidence has been submitted to suggest the level of charges could be restricting competition in the market and the wider objectives for the control. In any case, if evidence was to come to light, past practice suggests it would be better addressed through targeted casework, as opposed to this price review process.

5.102 Homenet also expressed concerns around one-off charges, namely the migration charge. With respect to this charge, the Authority notes this was subject to specific work in the past.[25] The Authority further notes the suggestion that the CP Broadband Interconnection service is charged on a cost orientation basis. As noted in the Draft Decision, currently the charges are set in line with prices of JT’s wholesale leased line products and the outcome of the remedies for the BCMR will help set the prices going forwards for these products.

5.103 Both Homenet and Sure raised concerns around product features for CP Broadband Interconnection services. The Authority would encourage OLOs to discuss their requirements with JT through the wholesale provisioning service to ensure the suite of wholesale products developed is fit for purpose. This will help ensure the full benefits of the control are achieved.

5.104 To complement this, Sure further suggested an additional requirement on JT to support efficient backhaul facilities. With respect to this, the Authority notes JT is taking a number of steps to increase the level of service it provides to its wholesale customers, for example the development of a wholesale charter. Given this renewed focus it is not clear there is rationale for further

[25] See Case - T589/10 - JT ADSL Margin Squeeze 2010: https://www.jcra.je/cases/2010/t58910-jt-adsl-margin-squeeze-2010/

regulatory requirements to be introduced, in particular given the already wide set of obligations imposed in respect of JT's SMP.

Further information:

Frontier Report, section 5 (Assessment of other charges)

Authority conclusion

5.105 The Authority will not change the approach or level of one-off charges in this price review. With respect to the CP Broadband Interconnection services, the BCMR process is the most appropriate process to address the level of these charges, so in the interim a safeguard cap, with the maximum level of prices set at current level of prices (in nominal terms), will help address any potential concerns. The prices for these services are set out in Figure 10 of the Frontier Report.

6 The impact of the Decision

6.1 This section refers to section 7 of the Draft Decision where the Authority set out its views on the impact of the proposals contained in the price review. Note, where respondents repeated points already made in earlier sections, those points have not been repeated here.

Draft Decision view

6.2 In the Draft Decision, the Authority set out its view that its proposals should result in greater competition between OLOs which in turn should deliver greater choice and lower retail prices to consumers, with significant positive externalities for the wider economy. The Authority also explained how its proposals would ensure that JT is able to recover its efficiently incurred costs, ensuring it is incentivised to continue to maintain and invest in its network.

6.3 Question 8 of the Draft Decision sought respondents' views on the impact of the Authority's proposals.

Draft Decision responses

6.4 Three respondents provided their views on the impact of the proposals set out in the Draft Decision.[26]

6.5 Sure noted that the Authority's proposals could have a positive impact on the market. Homenet concurred but stressed the importance of timing and implementation.

6.6 Airtel-Vodafone provided a price range which it considered appropriate for the 1Gbps service and proposed a periodic review of pricing every two years in order to ensure the Authority's approach to pricing and overall regulatory policy remains appropriate.

Authority analysis

6.7 The Authority notes respondents' views that the proposed approach would have a positive impact on the market.

6.8 In response to Homenet's comment on the importance of timing and implementation, the Authority notes the price review has been completed in line with the published timetable. Further, the implementation date of 1 October 2021 reflects the necessary statutory process required to implement the outcomes of this review. Given the importance of the review to Jersey, the Authority anticipates the full co-operation of licensed operators in helping achieve the implementation date.

6.9 In response to Airtel-Vodafone's view on the appropriate price level, the Authority notes that the objective of the cost oriented approach is to ensure recovery of those costs efficiently incurred by JT in its deployment and operation of the FTTP network, inclusive of a fair rate of return on capital employed. The prices calculated on this basis, set out in Figure 7, represent a reduction from current bitstream prices, with the difference between proposed and current prices widening throughout the price control period.

6.10 Concerning Airtel-Vodafone's suggestion of a biennial pricing review, the Authority considers that this would be incompatible with the principles underlying its five-year price control. In

[26] This does not include JT, which only reiterated a point already made in response to an earlier question.

particular, the key benefit of a longer price control period is to provide certainty to JT and OLOs alike; any prospect of adjustments to the price control within the five-year period removes that certainty. In any case, the Authority's prices are set based on a forward-looking view of costs and its regulatory policy objectives are unlikely to change during the period given the maturity and features of the market, notably JT's FTTP network has been fully rolled out and the absence of actual or prospective network competition.

Authority conclusion

6.11 The respondents' submissions support the Authority's preliminary conclusion set out in the Draft Decision, and summarised above, that the price review will bring substantial benefits to Jersey.

7 Final Decision

7.1 This section sets out the Authority's Final Decision on each element of the price review. These decisions have been used to calculate a maximum price for the relevant services, which are formally set out in the Initial Notice issued alongside this document.

The appropriate set of wholesale broadband access services

7.2 The appropriate set of wholesale broadband access services within the scope of the price review is wholesale bitstream services.

The appropriate regulatory pricing approach

7.3 The appropriate regulatory pricing approach is to set prices on a cost oriented basis, using a top-down model which includes adjustments for efficiency and to capture changes in asset valuation over time.

The appropriate price for the relevant services

7.4 In order to determine the appropriate price, the final positions on model scope and methodological choices must be considered. A summary of the Authority's positions on model scope and methodology are set out in Figure 8 below.

Figure 8: Final positions on model scope and methodological choices

Element	Approach
Service scope	Wholesale broadband (bitstream), and all other JT services provided using the same network / cost elements
Network scope	The existing JT FTTP network as of June 2020
Costs considered	Network capital costs (including site infrastructure), updated network operating costs and wholesaling costs, excluding HRVs
Time period	2021/22 - 2025/26
Price base	Nominal
Model type, cost standard and asset valuation method	Top-Down, FAC, CCA
Capital cost annualisation approach	Legacy assets: RAB approach, with holding gain adjustment Newly built assets: tilted annuity reflecting asset price trends
Efficiency adjustments	Opex trends reflect inflation and efficiency gains of 2.5% per annum

7.5 The appropriate price reflects a WACC of 8.7% (pre-tax nominal).

7.6 The appropriate charging approach is a fixed fee, under which the bitstream rental price is a single monthly charge per broadband subscriber that does not vary by bandwidth. A line rental service is necessary for the OLO to avail itself of the wholesale bitstream service.

7.7 The maximum monthly price for wholesale bitstream and WLR per subscriber over the price control period are set out in Figure 9 below, with each price control period reflecting the 12-month period 1 October to 30 September.

Figure 9: Summary of the maximum price for wholesale bitstream and WLR: 2021/22 – 2025/26

Element	Unit	2021/22	2022/23	2023/24	2024/25	2025/26
Maximum price	£/subscriber/month	27.94	26.95	26.06	25.25	24.51

7.8 No changes have been made to the approach to one-off charges. However, the Authority will impose a safeguard cap (maximum level of prices set at current level of prices (in nominal terms)) on CP Broadband Interconnection charges. This will apply for the duration of a transition period until the remedies from the BCMR have been finalised.