



Telecommunications Regulatory Authority of Bahrain

PUBLIC CONSULTATION

A public consultation document issued by the Telecommunications Regulatory Authority of the Kingdom of Bahrain (the “**TRA**”) in relation to

BNET’s proposal to amend its Reference Offer by introducing a new service “Closed Bitstream Service” and upgrading the existing WBS Essential and WBS Advanced bandwidths.

12 August 2024

Ref: LAD 0824 044

The address for responses to this document is:

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The deadline for responses is 16.00 on 11 September 2024.

Purpose: To seek stakeholders’ views on the proposed amendments to BNET’s Reference Offer.

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Executive Summary

Broadband is essential to fully participate in the digital economy. Bahrain has 100% 5G coverage and ubiquitous fibre availability. Everyone in Bahrain can access highspeed fibre and 5G services. BNET is the National Broadband Network, it provides its wholesale fibre broadband services to all operators on an equivalence of input basis under the terms of its Reference Offer.

Bahrain's strategic objective is to ensure it continues to have world leading fibre and mobile services. The National Telecommunications Plan, which sets out the Kingdom's telecommunications strategy and policy, defined the objective of all residential users being able to buy fibre broadband at speeds over 1Gbps at affordable prices. Business users should also be able to access speeds over 10Gbps.

To help to achieve this objective BNET has proposed to increase the speeds of all its fibre broadband services while retaining the current wholesale prices. Over 80% of residential users with fibre broadband services currently use the entry level speed of 100Mbps, BNET's proposal would treble the speed to 300Mbps while maintaining the same wholesale price.

BNET is also proposing to introduce a new Closed Bitstream Service to route applications across a broadband connection to a defined handover point on its network.

Changes to BNET's Reference Offer – the prices and products it sells – need to be approved by the TRA. Under the Telecommunications Law the TRA is required to ensure that the proposed changes are not unreasonable. The TRA also considers the proposed changes against its strategic objectives and the regulations and guidance papers it has issued. In general the TRA considers if the prices are Fair, Reasonable and Non-discriminatory.

The TRA has reviewed BNET's proposal and is now consulting on its initial conclusions.

The TRA's initial conclusions are:

1. It is minded to approve the proposed increase in speeds as set out in paragraph 60. It is of the view that the proposed increased WBS Essential speed of 2Gbps is priced high compared to international comparisons.
2. It is of the view that the tariff gradient is too steep compared to international comparisons and should be reconsidered.
3. It is minded to approve that the speed increases that are approved, can be automatically applied but it will be the retail operator's decision how they position, market and price this change to their customers.

I. BACKGROUND

- 1 On 30 April 2024, BNET submitted a request for the TRA to approve certain amendments to its Reference Offer ('RO') as follows:
 - a) Introduction of a new wholesale access service termed "Closed Bitstream Service (CBS)"; and
 - b) Upgrades to the existing WBS Essential and WBS Advanced bandwidths in addition to the provision of increased capacity of the initial free of charge aggregation service link without altering the current monthly recurring charges.
- 2 The proposed amendments are detailed in documents attached separately and marked as 'Schedule 3: Pricing CBS and new WBS speeds' and 'Schedule 6.1: CBS and new WBS speeds'.
- 3 On 12 June 2024 the TRA requested BNET to provide certain clarifications to the proposed amendments to which BNET responded on 4 July 2024.
- 4 BNET justified its proposals as follows:
 - (a) "The new Closed Bitstream Service (CBS) is being proposed as a data only service based on demand from national or public security entities in the Kingdom of Bahrain and provides special security features facilitated through the provision of a private VLAN for each CBS connection. CBS uses WBS Advanced as a basis and the monthly recurring charges prices represent an additional BHD10.000 on top of the current applicable WBS Advanced prices (with the exception of the WBS Advanced service used for voice services)."
 - (b) "The proposed speed upgrades will support the strategic vision of the Kingdom to transform into a "post-gigabit" society, offering high-capacity and high-quality services that are ubiquitously available to the entire population and all businesses independent of location, economic status, or health conditions. [...] BNET is determined to support the Government's strategic vision by introducing a glide-path towards achieving the minimum of 1 Gbit/s for residential users and 10 Gbit/s during the term of NTP6. The present Submission involves a first step towards achieving such objective by upgrading (at no additional cost) the existing WBS Essential and WBS Advance services' bandwidth from the current minimum of 100 Mbps to a new minimum of 300 Mbps and further upgrading the additional bandwidth options accordingly. This is a necessary step towards achieving the NTP6 objective in the three year's term and achieve the bold ambitions of the Kingdom to retain its leading position to become a post-gigabit society, and ensures it benchmarks its capabilities against the best in the world."

II. PROPOSED AMENDMENTS

NON-PRICE TERMS

Closed Bitstream Service (CBS):

- 5 CBS is a data-only service introduced, so BNET says, to meet the specific security demands of national or public security entities in Bahrain. It offers special security features facilitated through the provisioning of a private VLAN, routed to a handover point on BNET's network, for each CBS connection.
- 6 The monthly recurring charges for CBS would be an additional BHD 10 on top of the current applicable WBS Advanced monthly charges (excluding WBS Advanced service utilised for voice services).

Upgrades to WBS Essential and WBS Advanced Bandwidth:

- 7 BNET proposes bandwidth upgrades for existing WBS Essential and WBS Advanced services at no additional cost to the Licensed Operators ("the LOs").
- 8 The upgrade entails raising the current minimum bandwidth from 100 Mbps to a new minimum of 300 Mbps, with further upgrades to the additional bandwidth options. The proposed upgrades are as follows:

| WBS Essential | |
|-------------------------------------|--------------------------------------|
| Current bandwidth (download/upload) | Upgraded bandwidth (download/upload) |
| 100 Mbits/20 Mbits | 300 Mbits/60 Mbits |
| 200 Mbits/100 Mbits | 500 Mbits/250 Mbits |
| 300 Mbits/150 Mbits | 750 Mbits/375 Mbits |
| 500 Mbits/250 Mbits | 1 Gbits/500 Mbits |
| 1Gbits/500 Mbits | 2 Gbits/1 Gbits |

| WBS Advanced | |
|-------------------------------------|--------------------------------------|
| Current bandwidth (download/upload) | Upgraded bandwidth (download/upload) |
| 100 Mbits/50 Mbits | 300 Mbits/150 Mbits |
| 250Mbits/125 Mbits | 500 Mbits/350 Mbits |
| 500Mbits/350 Mbits | 750 Mbits/525 Mbits |
| 1 Gbits/1 Gbits | 1 Gbits/1 Gbits (no change) |
| N/A | 2 Gbits/2 Gbits (new option) |

- 9 Additionally, BNET proposes to provide the first 10 Gbit/s aggregation service link at no additional cost to customers, an increase from the current provision of 1 Gbit/s aggregation service link.
- 10 BNET clarified that its proposal to implement the proposed upgrades to WBS packages was dependent on the automatic upgrade of all existing packages.

PRICE TERMS

- 11 The below tables summarise the proposed speed upgrades with the corresponding monthly recurring charges:

A. WBS ESSENTIAL SERVICE

| Bandwidth (Contention ratio 15:1) | WBS Connection Monthly Recurring Charge (BD) |
|--|---|
| Voice only | 0.928 |
| 300 Mbit/s downstream / 60 Mbit/s upstream | 7.02 |
| 500 Mbit/s downstream / 250 Mbit/s upstream | 16.14 |
| 750 Mbit/s downstream / 375 Mbit/s upstream | 21.52 |
| 1 Gbit/s downstream / 500 Mbit/s upstream | 32.28 |
| 2 Gbit/s downstream / 1 Gbit/s upstream | 60.00 |

B. WBS ADVANCED SERVICE

| Bandwidth (Contention ration 8:1) | WBS Connection Monthly Recurring Charge (BD) |
|--|---|
| Voice only | 1.728 |
| 300 Mbit/s downstream / 150 Mbit/s upstream | 25.00 |
| 500 Mbit/s downstream / 350 Mbit/s upstream | 35.00 |
| 750 Mbit/s downstream/ 525 Mbit/s upstream | 50.00 |
| 1 Gbit/s downstream / 1 Gbit/s upstream | 95.00 |
| 2 Gbit/s downstream / 2 Gbit/s upstream | 175.00 |

C. CBS SERVICE

| Bandwidth | CBS Connection Monthly Recurring Charge (BD) |
|---|---|
| 300 Mbit/s downstream / 150 Mbit/s upstream | 35.00 |
| 500 Mbit/s downstream / 350 Mbit/s upstream | 45.00 |
| 750 Mbit/s downstream/ 525 Mbit/s upstream | 60.00 |
| 1 Gbit/s downstream / 1 Gbit/s upstream | 105.00 |
| 2 Gbit/s downstream / 2 Gbit/s upstream | 185.00 |

AGGREGATION LINKS FOR WBS SERVICES

| Bandwidth (Mbit/s) | Monthly Recurring Charge (BD) |
|--|-------------------------------|
| First single 10 Gbit/s Aggregation Link* | Charge included in MRC |
| Any additional 10 Gbit/s Aggregation Link (on request) | 358.50 |
| 100 Gbit/s Aggregation Link (on request) | 1,200.00 |

*The first single 10 Gbits/s WBS aggregation link is included in MRC.

Multiple free of charge 10 Gbits/s links cannot be availed by the same Access Seeker.

Any additional aggregation link for CBS to be provided by the Access Provider separately and may be included in the MRC for the relevant CBS service based on the Access Provider's assessment of the specific nature of the requirements of each Qualified End User."

- 12 To note, BNET proposes to provide the first 10 Gbit/s aggregation service link at no additional costs to the customer, whereas the current set up includes one 1 Gbit/s aggregation service link only. However, Schedule 6.1 (of the BNET RO) proposes to change one of the conditions of supply from "The aggregation [link] of 1 Gbit/s can be provided for **a maximum of two (2) geographically dispersed** Access Seeker Points of Presence " to "The first single aggregation link of 10 Gbit/s, the charge for which is already included in the MRC, can be provided for **a maximum of one (1)** Access Seeker's Points of Presence". (Bold highlight by the TRA)

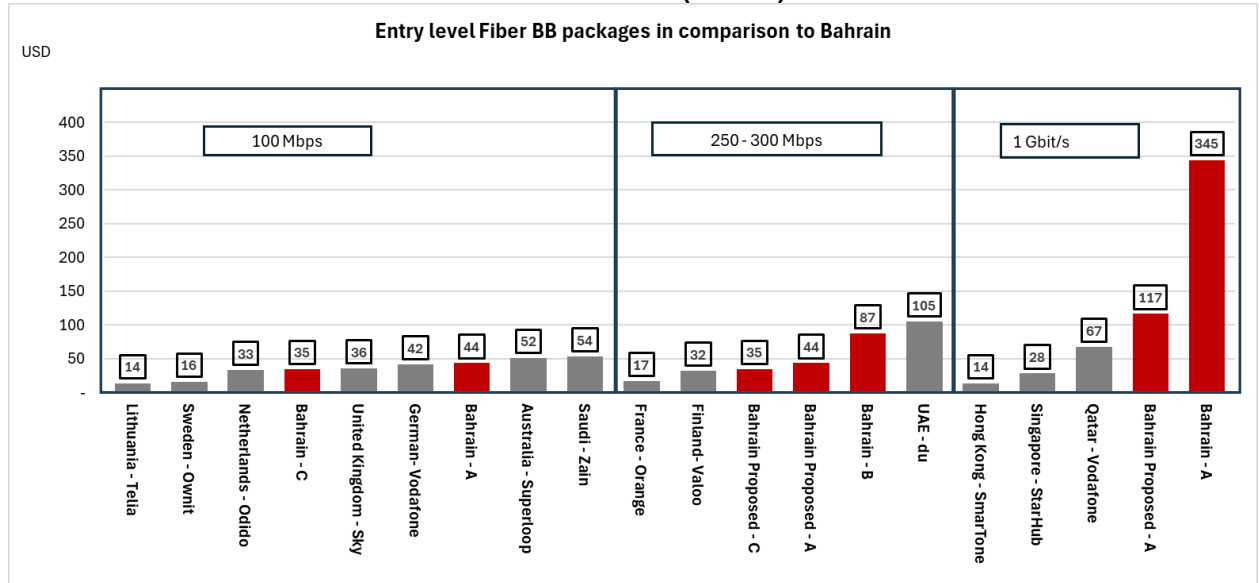
III. ANALYSIS OF BNET'S PROPOSALS

A. THE PROPOSED CHANGES TO WBS ESSENTIAL

- 13 The Sixth National Telecommunications Plan (NTP6) states that "The Government will promote access to high-speed broadband, offering speeds of over 1 Gbit/s for residential users and 10 Gbit/s symmetric speeds for businesses at affordable prices. The Kingdom is committed to providing world-leading capabilities and speeds for businesses by 2025 during the term of this National Telecom Plan 6." (paragraph 30a)
- 14 NTP6 not only promotes a "Post-Gigabit" society in Bahrain, but also that such services should be affordable. 1 Gbit/s speeds are already available to residential users, but the current retail prices are around BHD 130 to 140 per month with BNET's wholesale price being BHD 60. Given the specific reference in NTP6 to offering speeds of over 1 Gbit/s for residential users, we first focus on this speed in BNET's proposal, as well as on entry level speeds in general, although the proposal includes upgrades on all speeds currently supplied by BNET. We address BNET's proposals about the intermediate speeds (i.e. between the current 100 Mbit/s entry level and 1 Gbit/s), the new 2 Gbit/s speed, and overall proposal in the next sections of the document.

INTERNATIONAL COMPARISON – ENTRY LEVEL SPEEDS

Figure 1: International comparison of entry level speeds and prices for broadband connection -retail level (in USD)



Source: TRA analysis based on publicly available information¹

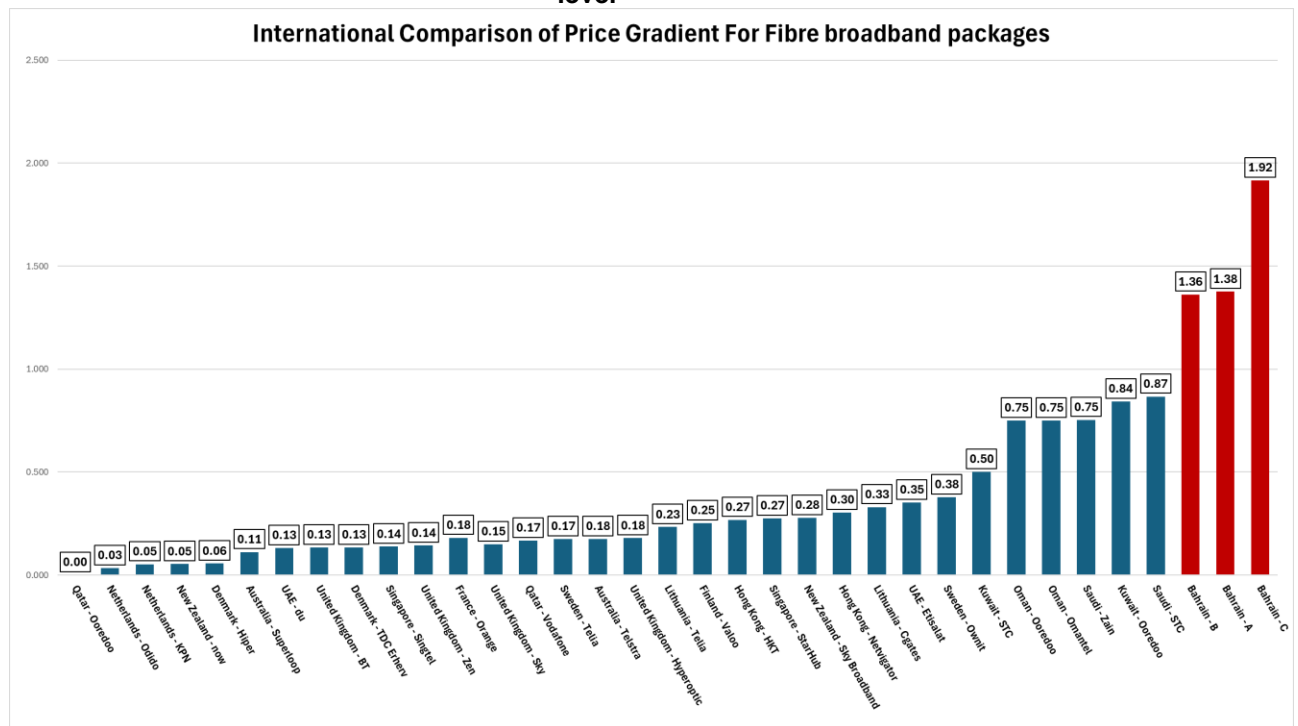
- 15 Figure 1 shows an international comparison of retail fibre broadband prices. It highlights three groups of countries with different entry level speeds. Bahrain's current entry level speed is 100Mbit/s. The second column lists the pricing in some comparable countries whose entry level speed is 250-300Mbit/s together with the corresponding price that would be applicable in Bahrain if the WBS proposed amendments were implemented. Finally, the last column includes the prices in comparable countries whose entry level speed is 1Gbit/s and the corresponding price in Bahrain if the WBS amendments proposed by BNET were to be implemented. The Bahrain proposed price assumes that the LO increases the speed without changing its retail price.
- 16 Bahrain's national fibre broadband coverage is ubiquitous, therefore almost everyone in Bahrain is able to enjoy high-speed fibre-based broadband. However, as recently as 2023, the entry level speed for fibre broadband was only 50 Mbit/s. In 2023, BNET's RO was revised. The revised WBS packages not only increased the entry level speeds to 100 Mbit/s but also brought BNET's prices more in line with those in other comparable international markets as evidenced by the first column in Figure 1 below.
- 17 Figure 1 demonstrates that, under BNET's proposal to upgrade the entry level speed to 300 Mbit/s, Bahrain's prices for that entry level speed would be competitive relative to GCC countries that have 250-300 Mbit/s as their entry level speed. However, these prices would still be higher than those in EU countries with this entry level speed. Additionally, Bahrain's prices would remain significantly higher than those in Singapore and Hong Kong despite these countries offering 1 Gbit/s as the entry level speed. Although we would observe based on the price gradient, the price of the 300 Mbit/s would become similar to other markets where this is an available option.

¹ TRA analysis based on information on operators' websites (as of 22 July 2024).

- 18 Furthermore, Figure 1 highlights that current retail prices for a 1Gbit/s broadband connection in Bahrain are very high, in fact they are the highest among compared regions. They are not only high compared to Singapore, Hong Kong and Qatar (where 1 Gbit/s is the entry level speed) but also compared to other countries that offer 1 Gbit/s packages. The price differences are significant, with current prices in Bahrain ranging from BHD 130 to BHD 140², making 1Gbit/s connections very expensive.
- 19 We note that while BNET’s proposal would result in the prices being significantly lower than they currently are, they would still be significantly higher than the prices in Qatar, Singapore and Hong Kong.
- 20 Figure 1-A in Annex 3 shows that Bahrain’s 1 Gbit/s prices remain high compared to other countries that offer 1 Gbit/s services.

INTERNATIONAL COMPARISON – PRICE GRADIENT

Figure 2: International comparison of price gradient for fibre broadband packages - retail level



Source: TRA analysis based on publicly available information³

- 21 Figure 2 shows an international comparison of the price gradient for retail fibre broadband packages. The price gradient calculates the difference between the highest and lowest priced package over the number of packages offered by the operator, therefore showing the additional amount a customer would pay for an upgrade⁴. This concept helps illustrate the competitiveness and affordability of telecom services in various regions. The price gradient metric also helps standardize comparisons between different service plans and countries by focusing on the value provided for the price.

² Prices as the latest on operators’ websites (as of 22 July 2024)

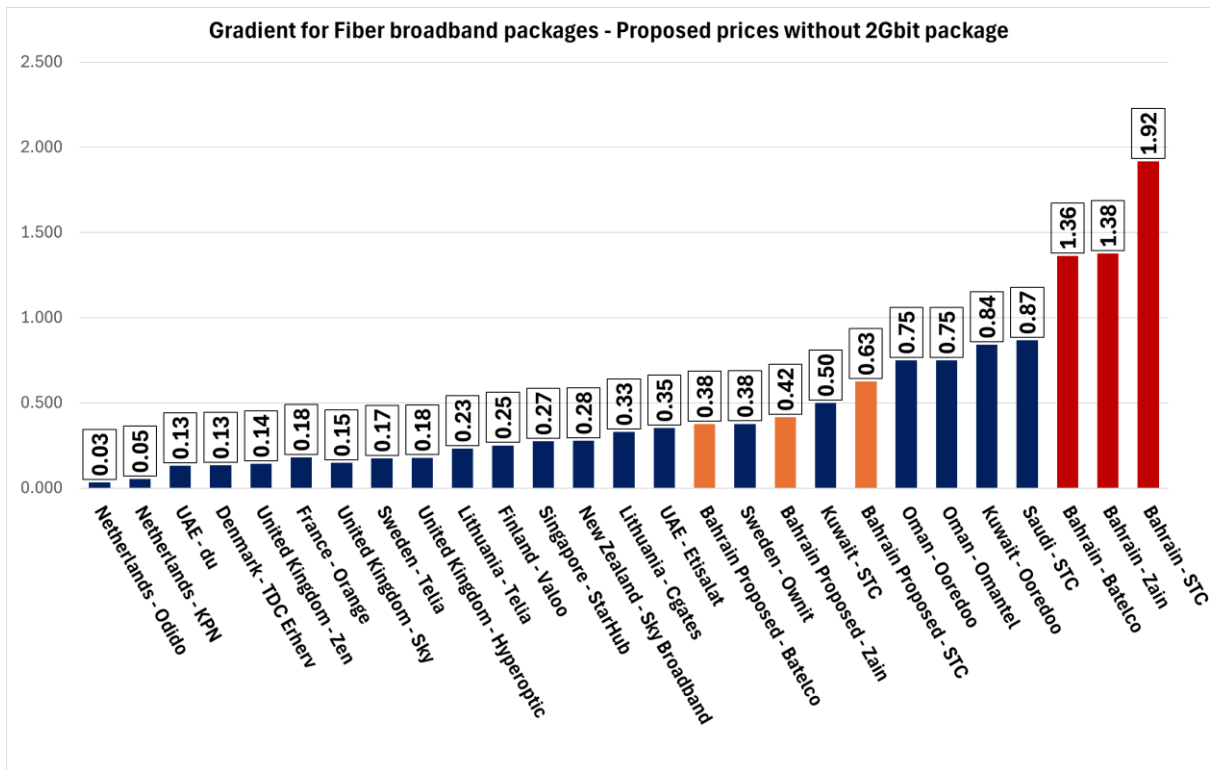
³ TRA analysis based on information on operators’ websites (as of 22 July 2024).

⁴ For example, on average, for a customer of Ooredoo Kuwait (with 0.84 gradient) with a current package that costs \$10 they will have to pay an extra \$8.4 to upgrade to the next package.

- 22 As can be seen in Figure 2 the price gradient is much higher in Bahrain than in other countries. In fact, it is the highest. A high gradient suggests that customers would have to pay disproportionately more to get faster broadband, i.e. a customer in Bahrain would have to pay an additional \$20 to upgrade from the entry level speed of 100Mbit/s to 200Mbit/s, and an additional \$70 to upgrade from 100Mbit/s to 500Mbit/s or an additional \$54 to upgrade from 200Mbit/s to 500Mbit/s. This places higher speed packages at a premium, making them less accessible and discouraging customers from upgrading their broadband packages.
- 23 The TRA notes the observed difference in price gradient between operators in Bahrain with one being higher than the other two. This stems from the fact that this operator has the lowest entry level price, and the highest price on the high-speed package of 1Gbit/s, which in turn gives the result of a steeper gradient.
- 24 The current 1Gbit/s packages in Bahrain, priced between BHD130 to BHD140 are more than nine times the cost of the current entry level (100Mbps) packages. Under BNET's proposal, the 1Gbit/s, priced at BHD/month 44.7⁵, would be more than 2.5 times the entry level price. Such a large price differential does not appear to be consistent with the cost drivers of fibre broadband networks nor consistent with the differential observed in other countries.
- 25 This may have implications for the continued development of the competitive market as customers will be limited to the lower-level speeds given the current gradient. As such, the TRA is minded to believe that the structure of the present price gradient for the WBS product in Bahrain does not support the objective of either reaching the "Post-Gigabit Society" or ensuring customers access world leading services that meet their needs. The prices for the higher speeds need to be significantly lower in order to achieve a price gradient more consistent with other comparable advanced countries.
- 26 However, if we compare the gradients under the new proposal, assuming operators will pass on the speed upgrades without changing the prices and removing the highest package out of the range (i.e. the 2Gbit/s package), we observe that the gradients decrease significantly and while still steep are becoming more in line with other countries as demonstrated in Figure 3.

⁵ This is a simple average based on the current retail prices for the 500 Mbit/s (BHD/month 44 for Batelco and Zain and BHD/month of 46.2 for stc, prices on operators' websites), assuming retail operators would fully pass the upgrade without amending their retail prices.

Figure 3: International comparison of price gradient for fibre broadband packages without 2 Gbits package - retail level

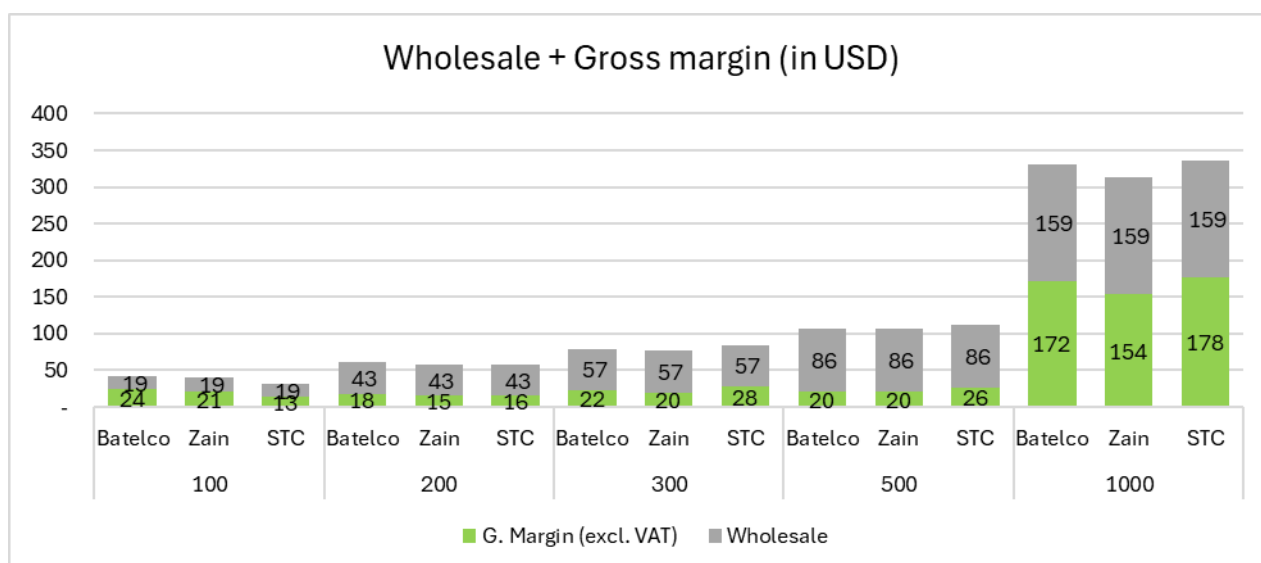


Source: TRA analysis based on publicly available information

COMPETITION AND MOBILE 5G BROADBAND

- 27 Customers are able to buy competitive broadband products from multiple suppliers. The establishment of BNET as a separate legal entity providing wholesale broadband services on equal terms to all LOs through the reference offer ensures a level playing field in the provision of fibre broadband services and prices. The LOs all have access to the same network services from BNET and pay the same prices.
- 28 There are no signs indicating that BNET is cross subsidizing its broadband services relative to the fibre capacity services it offers. On the contrary, the previous analysis in the “price gradient” section indicates that BNET’s prices for the higher speed WBS services are relatively high, especially given that broadband cost drivers would suggest BNET’s additional cost input for higher speed WBS services is low. In addition, more than 80% of the WBS circuits are subscribed to the entry level speeds, negating the argument of cross-subsidizing costs between the different WBS circuits.
- 29 On the retail broadband market there is a large variety of marketing offers available and extensive marketing campaigns have taken place. To further remove barriers to switching between LOs, the TRA has changed the process for transferring broadband retail services between different LOs, this change was in addition introduced to further reduce possible barriers to competition.
- 30 In addition, current gross margins available for LOs using current retail prices minus wholesale input, are sustainable. Gross margins range from 27% to 60% depending on the LOs pricing strategy.

Figure 4: Wholesale and gross margins (in USD)



Source: TRA analysis based on publicly available information

- 31 All MNOs currently offer 5G standalone mobile broadband services at speeds similar to the fibre broadband speeds. Furthermore, 5G can achieve ultra-high broadband speeds, but this depends upon the MNO radio network access capabilities. In the recent QoS report, 5G speeds reached an average of well above 300 Mbps/s.
- 32 In addition to providing similar services to fibre broadband, standalone mobile broadband has many capabilities that fixed services cannot offer, such as mobility. These capabilities make mobile broadband attractive to many users in Bahrain, although fibre broadband, given its higher stability, maybe more attractive for some fixed applications.
- 33 MNOs offer a variety of mobile broadband packages that both complement and compete with fibre broadband.
- 34 Comparing directly between the speeds of 5G standalone broadband with retail fibre broadband is not straightforward due to the fact that MNO's packages have different package structures. The offers with 5G standalone broadband are primarily packaged either with different specific speeds or with data thresholds without specific speeds.

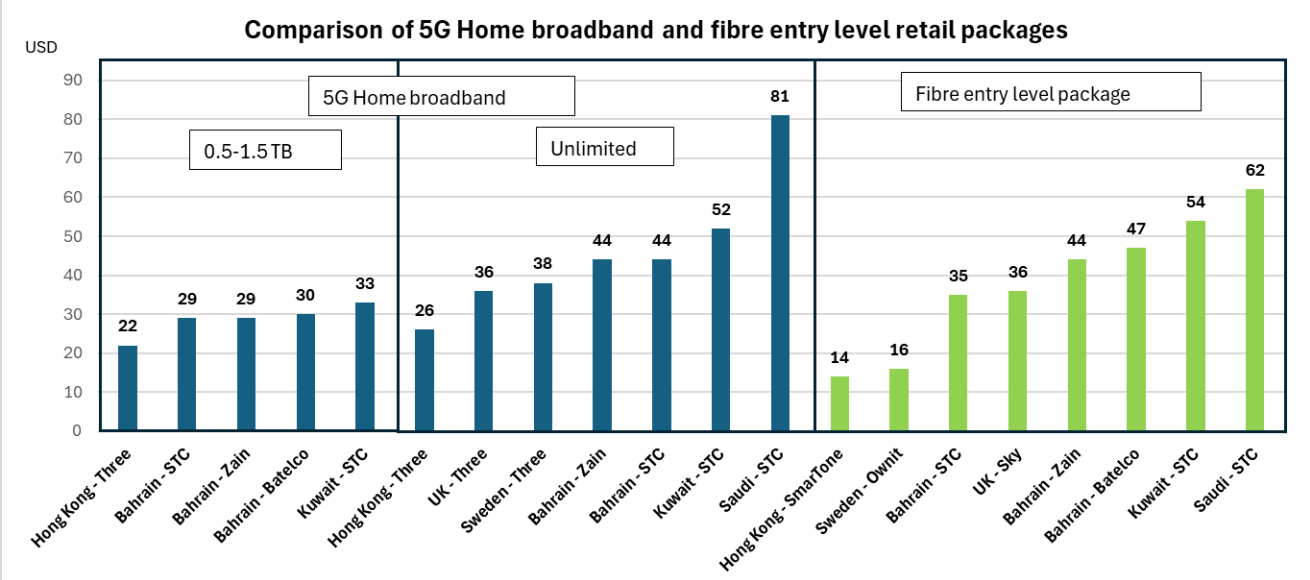
| MNO | Package Type | Price 1 | Price 2 | Price 3 | Price 4 | Price 5 |
|---------|------------------------|---------|---------|---------|---------|---------|
| Batelco | <i>5G Boadband</i> | 30 | 44 | | | |
| | <i>Fiber Broadband</i> | 47 | 67 | 87 | 117 | 364 |
| Zain | <i>5G Boadband</i> | 29 | 44 | 58 | 102 | |
| | <i>Fiber Broadband</i> | 44 | 64 | 85 | 117 | 345 |
| STC | <i>5G Boadband</i> | 29 | 44 | 58 | | |
| | <i>Fiber Broadband</i> | 35 | 64 | 93 | 122 | 370 |

Source: TRA analysis based on publicly available information

- 35 Table 1 above shows that MNOs are offering 5G Broadband at prices that are lower than comparative fibre packages.

36 The TRA recognises that some MNO’s have raised concerns about competition between BNET’s WBS proposals relative to their 5G Broadband offerings. It has been suggested that BNET should at the same time as proposing changes to WBS also propose similar changes to its MDS-A services. It was also suggested that WBS changes should not be approved as they may distort competition with 5G services. This, they argue, is because customers buy services based upon speed and 5G cannot guarantee the same entry speed.

Figure 5: International comparison of 5G and fibre broadband packages



Source: TRA analysis based on publicly available information

37 Internationally, 5G home broadband offerings primarily compete on data thresholds and price. These packages typically bundle high-speed 5G internet with varying data thresholds.

38 As shown in Figure 5, 5G home broadband plans are compared to entry-level fibre options. For 5G, prices generally increase with data allowance, with capped plans being cheaper than unlimited ones. Fiber entry-level pricing varies by country. In the UK, unlimited 5G home broadband is priced similarly to entry-level fibre. However, in Hong Kong and Sweden, fibre is cheaper, suggesting that 5G offerings in these markets compete on factors beyond speed. Conversely, GCC countries show a closer price match between unlimited 5G home broadband and unlimited fibre plans.

39 Furthermore, in several of the 5G home broadband package offers the focus is on ease of getting started and simplicity to install. This means that 5G can primarily complement fibre in many markets in such a way that enabling high speed broadband in places where fibre is not readily available for the time being or will not be in the foreseeable future.

40 It seems that in countries with high fibre coverage, such as Singapore and Hong Kong, the offers to 5G home broadband are minimal. In addition, fibre broadband packages are cheaper than 5G home broadband.

41 The TRA notes that there are ongoing discussions about the costs associated with the provision of fibre capacity services to support the operation of mobile networks. Bahrain currently has world leading 5G services and it is important that this is maintained. However, it is inappropriate to link MDS-A and WBS as their purposes and drivers are fundamentally

different. Furthermore, it would not be appropriate that every time there is a change in mobile standards and capabilities, we should have a change in WBS. While we should not favour one technology over the other (both are strategically important) both evolve separately.

- 42 In all other countries we have observed there are both 5G and fibre broadband services. In advanced markets like Singapore and Hong Kong that have (similar to Bahrain), high 5G and fibre availability, there is no suggestion that one is constrained because of the capabilities of the other. Indeed, in Singapore and Hong Kong the entry speed for fibre is much higher than Bahrain's even with the current proposals.
- 43 TRA does not believe it should advantage or disadvantage customers who select one technology over another. Customers should have access to world-class fibre broadband and advanced mobile services at competitive prices.
- 44 The TRA recognises that the proposed changes may impact the competitive dynamics between mobile and fixed broadband. However, we believe that it is the responsibility of LOs to determine the pricing and terms of their services in the market, and not BNET's role, as a wholesale provider, to unduly influence retail market dynamics.

OTHER COSTS TO LICENSED OPERATORS (“LOs”)

- 45 As the proposed upgrade would apply equally and without discrimination to all LOs, the TRA considers there would be no discrimination concerns about the proposals. Furthermore, as the upgrades are without any price increase from BNET, LOs would be in an equal position to market the services to their retail customers. We also expect that, given the competitive dynamics of the market, the retail LOs would pass the upgrades onto their customers.
- 46 The TRA is also aware that there are other costs for retail LOs that may be related to the proposed upgrades. Retail LOs have costs that vary with changes in speed and data volumes for the content of the services that are delivered to and used by their customers. Retail LOs also have costs associated with regulatory requirements as well as the tools used to protect their customers and measures associated with keeping their networks safe and secure. Such additional costs may imply that it is not always possible to keep the same retail prices for a service with a higher speed even when BNET maintains the same wholesale price.

IMPLEMENTATION OF BNET'S PROPOSAL

- 47 BNET said its offer is conditional on the upgrades being done automatically, as opposed to the LOs deciding when to pass the upgraded speed to their customers. The latter was the process used for BNET's proposed upgrades when the RO was last reviewed in 2023. The TRA's position is that BNET is a wholesaler and should not dictate the commercial strategies of LOs in the retail markets, it should be for the LOs to define their own retail strategies.
- 48 Under the proposed automatic upgrade, however, BNET would directly upgrade the end-users. BNET's justification for the automatic upgrade proposal is that, following the last RO review, the “manual” upgrade process based on instructions from LOs was cumbersome, lengthy, required time and effort, created multiple billing disputes, and was therefore highly inefficient. The TRA's position remains that BNET is a wholesaler and should not dictate the commercial strategies of LOs in the retail markets. However, the

TRA is minded to not object to the automatic speed upgrade by BNET, but it will be a matter for the retail LOs how they market the changes to their customers. Furthermore, it will be for the retail LOs to determine if they wish to reduce the speed/service provided to their customers.

B. THE PROPOSED CHANGES TO WBS ADVANCED

- 49 The TRA also welcomes the BNET proposal to WBS Advanced services with the upgrade of bandwidths and the addition of the service with 2 Gbit/s speed. As the service of 2 Gbit/s speed is proposed as a new service and not upgrading an existing speed, it in effect means a new option and an additional level of bandwidth being offered by BNET. The TRA believes this is positive since the additional step increases the number of choices for customers when considering an upgrade to higher speeds. However, the proposed price for the 2 Gbit/s is high compared to the proposed price for the 1 Gbit/s, hence, limiting the accessibility to this speed.
- 50 Regarding the WBS Advanced and the analysis of the BNET proposal, the TRA believes that in general, what applies to WBS Essential also applies to WBS Advanced. In particular, as for the WBS Essential, it is important to review the price steps between the different bandwidth levels that are being offered. In doing so and following the same analysis as for the WBS Essential service, the TRA is concerned about the structure of the current price gradient in the BNET proposal for WBS Advanced.
- 51 Given the current gradient and as pointed out earlier, this may have implications for the development of the competitive market as customers may be disinclined to enhance their package speed. As such, the TRA is minded to believe that the structure of the present price gradient for the WBS Advanced product does not support the objective of either reaching the “Post-Gigabit Society” objective or ensuring customers access to world leading services that meet their needs. The prices for the higher speeds need to be lower in order to achieve a price gradient more consistent with other comparable countries.

C. THE PROPOSED INTRODUCTION OF CBS

- 52 The TRA notes the introduction of this new product. However, a similar capability is already available in the RO using the additional VLAN capability.
- 53 The TRA understands that the standard price for the underlying WBS Advanced will be the same. The additional charge on top of the standard WBS Advanced price is due to a separate CBS Aggregation point (which is inclusive) and new specific VLAN configurations that will be used for CBS and transported towards separate L2 aggregation at qualified end user sites. The TRA believes that the rationale for the proposed pricing appears reasonable given the charges already included in the RO for a similar service.
- 54 The TRA notes that some LOs have expressed concern that BNET appears to have engaged with end customers directly to develop this product. BNET is a wholesale only operator and is only able to sell its products to LOs. BNET does however, need to understand market needs to enable it to develop its product portfolio. It can not only be expected these market needs come via the LOs who are its customers. Having reviewed the new product the TRA believes that more entities should be able to benefit from the enhanced features of this product. Accordingly, in the TRA’s view, the use of the CBS product should not be limited to “national or public security entities in the Kingdom of Bahrain” as this product would benefit other customers based in the Kingdom. There are multiple use cases for this product that can help other customers in further securing their connections.

IV. THE TRA'S POSITION

A. FRAND REQUIREMENTS

- 55 The TRA's view is that the terms and conditions of the CBS and the upgrades to the existing WBS bandwidths must meet the FRAND requirements.
- 56 What signifies FRAND may be different from one context to another. One central characteristic of "fair" is to correct any possible imbalance of market power between two sides and to match an outcome in a competitive market, i.e. a "fair" deal for both sides. For "reasonable" in the context of access it could be viewed more as a question of the price. If the price paid by access seeker would allow it to compete effectively in the downstream market and whether the access provider has sufficient incentive to produce and develop the access services over time, then the price may be viewed as a "reasonable" price.
- 57 The TRA considers that the CBS service and the WBS bandwidths must be supplied by BNET to eligible access seekers on price and non-price terms that are FRAND. In minding to approve the terms, the TRA has, among other things, taken into account the following:⁶
- Ensuring Bahrain has sustainable world-leading broadband infrastructure that is capable of providing broadband services, at globally competitive prices ensuring everyone can fully participate in the digital economy.
 - Ensuring Bahrain had dedicated fibre services that meet the needs of businesses ensuring the telecommunications sector fully supports Bahrain as one of the best places to establish and operate a business.
 - Ensuring Bahrain has connectivity capability that enables Licensed Operators (e.g. Mobile Network Operators), to continue to provide the most advanced services possible, at prices that sustain Bahrain's global competitiveness. This means that LOs, which can no longer deploy their own fibre infrastructure, are not cost disadvantaged compared to other countries.
 - BNET is a sustainable business that makes a reasonable return, is attractive to investors and therefore can access funds to invest to ensure that Bahrain always has world class fibre infrastructure and services.
- 58 After careful consideration of these principles, the TRA is of the view that:
- The proposed amendments aim to maintain a sustainable infrastructure capable of providing broadband services at competitive prices. However, the TRA acknowledges that the current pricing structure may need adjustments, specifically for the 1Gbits to 2Gbits WBS bandwidths, to fully support Bahrain's competitiveness.
 - While CBS is proposed to meet the specific security demands of national or public security entities, the TRA is of the view that this service should be extended to all enterprise customers. This broader scope will ensure the telecommunications sector fully supports Bahrain as one of the best places to establish and operate a business.

⁶ In its discussion paper that was published on 31 October 2023, the TRA had opined on four guiding principles when setting out the pricing framework for BNET (Ref: LAD 1023 011).

Moreover, the proposal to upgrade bandwidths for existing WBS Essential and WBS Advanced services, at no additional cost to LOs, further contributes to this principle.

- The upgrades to WBS Essential and WBS Advanced bandwidths enable LOs to continue providing advanced services competitively. However, the TRA acknowledges that adjustments to the current pricing structure may be needed to fully support Bahrain’s competitive position globally.
- The proposed amendments ensure that BNET remains a sustainable business capable of making a reasonable return and attracting investors.

59 The TRA therefore finds that, subject to the TRA’s views as outlined within this document, the terms and conditions for the CBS, WBS Essential, and WBS Advanced services are FRAND.

B. TRA’S VIEW ON THE PROPOSED CHANGES TO WBS ESSENTIAL AND WBS ADVANCED

60 The TRA is minded to accept the proposed speed increases for the following packages:

| WBS Essential | |
|--|---|
| Current bandwidth (download/upload) | Upgraded bandwidth (download/upload) |
| 100 Mbits/20 Mbits | 300 Mbits/60 Mbits |
| 200 Mbits/100 Mbits | 500 Mbits/250 Mbits |
| 300 Mbits/150 Mbits | 750 Mbits/375 Mbits |
| 500 Mbits/250 Mbits | 1 Gbits/500 Mbits |
| WBS Advanced | |
| Current bandwidth (download/upload) | Upgraded bandwidth (download/upload) |
| 100 Mbits/50 Mbits | 300 Mbits/150 Mbits |
| 250Mbits/125 Mbits | 500 Mbits/350 Mbits |
| 500Mbits/350 Mbits | 750 Mbits/525 Mbits |
| 1 Gbits/1 Gbits | 1 Gbits/1 Gbits (no change) |

61 It is also minded to accept the automatic upgrade of the speeds it provides to LOs as long as it is up to the LOs to decide how to make the speed increases available to the customers.

62 The TRA at this stage is not minded to accept the 1 Gbits to 2 Gbits proposed increases in speed as it believes that the current proposed price gradient is too steep and that BNET should review the pricing and reduce the price gradient to be more consistent with the observed price gradients in other comparable markets.

63 It is worth pointing out that even though the TRA is minded to accept the automatic upgrades for the packages mentioned above, we still see that the gradient between these packages is steep, even after removing the proposed 2 Gbits from the gradient calculation. BNET and LOs should consider how to improve this situation.

- 64 The TRA invites stakeholders' comments on all BNET's proposed changes to Schedule 6.1. This includes in relation to the aggregation links- While BNET proposes to increase the capacity of the first free aggregation link from 1 Gbit/s to 10 Gbit/s, the link is now offered from a maximum of one POP, instead of two "geographically dispersed" POPs. The TRA observes that the increase in the capacity of the aggregation link will offset costs associated with possible increases in peak traffic as a result of the increase in WBS speeds.

C. TRA'S VIEW ON THE PROPOSED INTRODUCTION OF CBS

- 65 The TRA is minded to approve the CBS service as a new product. It is also minded to approve the proposed speed packages and respective monthly recurring charges. The TRA believes that the scope of the CBS product should be extended such that all enterprise customers may avail themselves of this service.

V. PURPOSE OF THIS CONSULTATION

- 66 The TRA would like to receive views and comments on the proposed changes to BNET's RO by 4pm on 11 September 2024.
- 67 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex 1.
- 68 The information contained in this document is intended to provide background on the TRA's position. Any views set out in this Consultation Paper should be considered as indicative and will be subject to further consideration following the receipt of comments from interested parties.
- 69 This Consultation Paper is not a binding legal document and does not contain legal, commercial, financial, technical or other advice. The TRA is not bound by it, nor does it necessarily represent a decision of the TRA. The matters discussed in this document remain open to consideration and should not be construed as indicating that the TRA has formed any final opinion or decision.
- 70 Once the TRA has received and considered responses to this Consultation Paper, the TRA will decide whether to proceed with approving changes to BNET's RO or issue an order if the changes are not approved.

ANNEX 1 - CONSULTATION QUESTIONS

I. THE PROPOSED AMENDMENTS

- Q1 Do you support the introduction of the Closed Bitstream Service (CBS)? If not, please provide your reasons.
- Q2 Do you support the proposed upgrades to WBS Essential and WBS Advanced bandwidths? If not, please provide your reasons.

II. NON-PRICE TERMS

- Q3 Do you consider that the non-price terms outlined in the proposed amendments are fit for purpose and meet the reasonable requirements of LOs?

III. PRICE TERMS

- Q4 Do you agree that the proposed price terms for the CBS and the upgraded WBS services meet the FRAND requirements?

IV. OTHER COMMENTS

- Q5 Do you have any other comments regarding BNET's proposal? If you do, please explain these in relation to (a) their impacts on competition; and (b) their impacts on consumers.

ANNEX 2 – SUBMITTING A RESPONSE

- 1 The TRA invites comments on this consultation paper from all interested parties. Comments should be submitted no later than **11 September 2024 by 4pm**.
- 2 Responses to this document should be in a Microsoft Word format and must be accompanied by a consultation coversheet which can be downloaded from the [TRA website](#).
- 3 Responses should be sent to the TRA for the attention of the General Director by email to TCD@tra.org.bh.
- 4 Alternatively, responses may be sent to the address below:

The General Director
Telecommunications Regulatory Authority
P.O. BOX 10353, Manama, Kingdom of Bahrain
- 5 Responses should include direct answers to the questions asked in the consultation paper. Interested parties are encouraged to provide answers that are fully substantiated and supported as far as possible by evidence. The questions are listed at Annex 1. Respondents do not have to answer all the questions in the consultation if they do not have a view; a short response is fine, the TRA also welcomes joint responses.
- 6 Respondents who wish to discuss the questions raised in this consultation paper may email TCD@tra.org.bh.

Confidentiality

- 7 In the interest of transparency and good regulatory practice, the TRA, subject to the confidentiality of the information received, will publish all responses received on its website as soon as it receives them. The TRA will evaluate requests for confidentiality in line with relevant legal provisions and the TRA's published guidance on the treatment of confidential and non-confidential information.⁵
- 8 Respondents are required to fill out the consultation coversheet and clearly mark any information included in their submission which is considered confidential. Where such confidential information is included, respondents are required to provide both a confidential and non-confidential version of their submission. If a submission is marked confidential in its entirety, reasons for this should be provided. The TRA may publish or refrain from publishing any document or submission at its sole discretion.

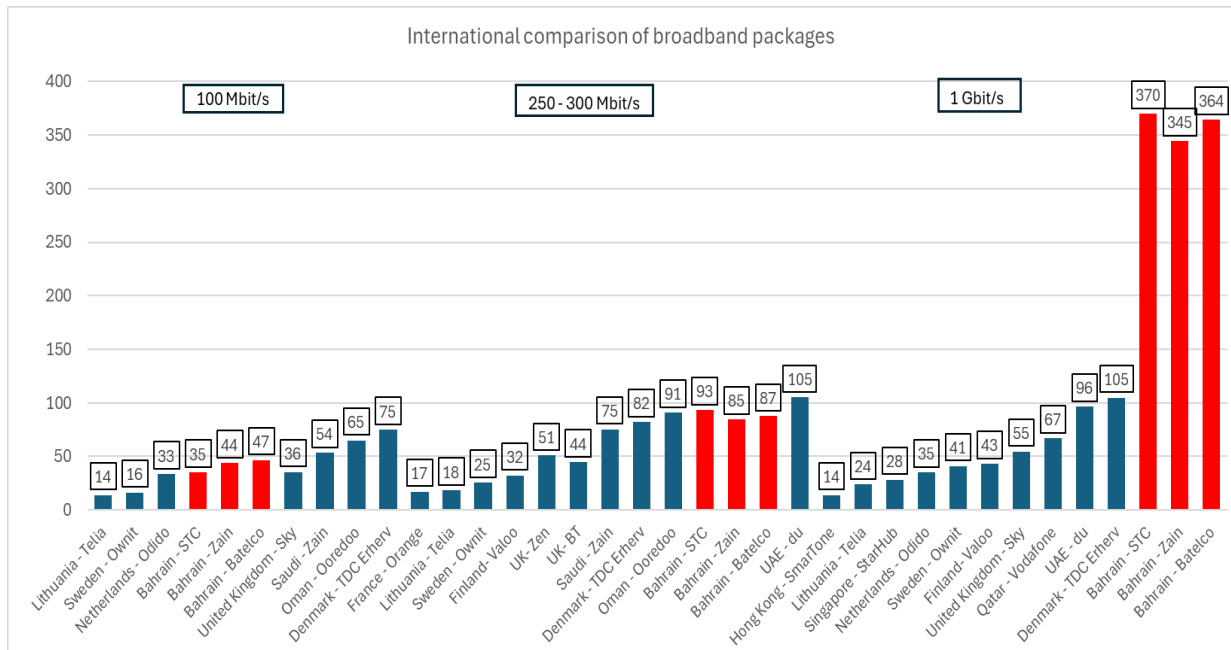
Next steps

- 9 Once the TRA has received and considered responses to this document, the TRA will decide whether/how to proceed.

ANNEX 3 – INTERNATIONAL COMPARISON

International comparison of speeds and prices for different packages of broadband connections. Prices in USD.

Figure 1-A



Source: TRA analysis based on publicly available information⁷

⁷ TRA analysis based on information on operators' websites (as of 22 July 2024)