



Decision No.1 of 2023 issued by the Telecommunications Regulatory Authority (“the Authority”) approving the final BNET Reference Offer (“the RO”)

Ref: LAD 0423 001

2 April 2023

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EXECUTIVE SUMMARY

Access to good quality broadband services, at affordable prices by consumers and businesses, is now essential. The TRA's strategic objective is to ensure Bahrain is one of the best-connected places in the world with fibre infrastructure and mobile services that are world leading.

BNET is Bahrain's National Broadband Network. It has been established to be the sole provider of fibre services in the Kingdom. The model used in Bahrain is currently globally unique¹. BNET services not only provide the broadband services that everyone buys through their retail service provider, but BNET's fibre-based services are also used by all other Licenced Operators to support their networks. This includes the 5G mobile networks.

BNET is required to offer access to its network only on terms that are defined in its Reference Offer. BNET's Reference Offer has to be approved by the TRA.

The TRA, through its consultations with Licenced Operators and other stakeholders, has been reviewing BNET's Reference Offer. This document is TRA's approval of the Reference Offer and provides the TRA's views on the offer and process.

Broadband Services for Consumers and Business Customers

According to BNET, its fibre currently covers around 83% of residential premises and 100% of business premises.² Around 67% of households have a fibre broadband service from one of the retail service providers who have agreements with BNET. Bahrain has some of the lowest broadband prices in the GCC. However, the fibre entry speed was low compared to other fibre markets.

Retail competition is vibrant in the broadband market and has intensified following recent decisions issued by the TRA. Batelco has 77% market share of the fibre broadband market.

Following multiple rounds of consultations and extensive discussions with industry, BNET's new Reference Offer will double the speed of the fibre entry package but at the same wholesale price as the current entry speed service – BD 7.02/month, whilst the wholesale prices of other fibre broadband speeds will either remain the same or reduce by up to 25%.

¹ In Bahrain BNET is the sole provider of all fibre services. In other countries governments have invested to secure fibre broadband to rural and other difficult to reach locations and/or have business focusing on broadband provision. Other fibre services are competitive.

² TRA is verifying these figures as customer feedback and its analysis indicates the coverage is lower.

BNET is a wholesale provider. It is the Retail Service Providers who should define their commercial strategy and the retail packages they offer to customers. Given the TRA's objective to ensure that retail competition remains vibrant and is sustainable, the TRA has concluded that:

- BNET may not automatically upgrade a customer's services; BNET services previously defined by end-user type (i.e. Business or Residential) are changed so they become defined by the service's technical characteristics instead.
- To minimise any risk of the terms of this Reference Offer impacting competition in the retail broadband market, the TRA will take proportionate measures to prevent market foreclosure by using the increase in speeds to require a user to commit to a new service contract. The TRA wishes to therefore, prevent any actual or perceived "lock-in" of customers.
- We want effective retail competition so that consumers have access to products and services that best meets their needs at competitive prices. We will therefore undertake a study to identify if there are any barriers to consumers actually switching service providers.
- BNET's new WBS pricing should benefit customers. Although the TRA still believes the prices for high broadband speeds (especially 1Gbps) result in retail prices that are very high compared to other countries. This limits the ability of users to experience the full capacity of fibre broadband. To achieve our ambition of being one of the best-connected places in the world, even following the recent proposed reduction, everybody needs to have access to fibre broadband services at increasingly faster speeds. The TRA will engage with stakeholders to develop a roadmap to deliver the speeds we need in the future at internationally competitive prices.

Services to Other Operators to Support the Operation of their Networks

BNET fibre-based services are used by all Licenced Operators, including mobile operators, to support their networks. Until they conclude the full transfer to BNET fibre services, mobile operators can still use their own fibre in addition to microwave technology, to connect their cell sites to the rest of their mobile network. BNET therefore, needs to provide a portfolio of products to enable mobile operators to efficiently support everyone in the Kingdom, having access to the latest mobile technologies, good coverage and at competitive prices.

While Batelco has transferred the ownership of its fibre assets to BNET, individual fibre connections are being transferred to BNET's operational control under a plan that is being monitored by the TRA.

BNET is currently negotiating the terms under which the other Licenced Operators fibre assets will be transferred to BNET. The TRA believes that commercial negotiations between the operators and BNET will secure the most appropriate commercial arrangements. However, the TRA will intervene if suitable arrangements cannot be concluded within a reasonable time.

Mindful of the current status of the asset transfer programme, and considering the recent amendments BNET has made to its proposals, the TRA has concluded that:

- The final BNET Reference Offer proposal for MDS-A services including the proposed discount scheme is approved. This will provide the active services required by operators at a discount to current prices of between 11 and 25% depending on each operator's mix of speeds and total number of connections they have.
- Operators in their consultation responses have requested that BNET introduces additional services and speeds. It is not for the TRA to decide what services are needed by BNET's customers. However, we would encourage BNET to work with its customers to ensure that it continues to meet all its customers' needs.

As part of its asset transfer work, the TRA will undertake a review of the portfolio of services BNET offers to other Licenced Operators to support the operation of their networks. This review will ensure BNET offers the appropriate mix of active and passive products at pricing that not only enables Bahrain to have world class fibre-based services, but also continues to have world leading mobile services at competitive retail prices.

Services to Support Business Connectivity

BNET's fibre-based services are used by Licenced Operators to support the services they offer to businesses. For example, services that support data centres, an organisation's private network, support banks' ATM's.

BNET had initially proposed to withdraw several products. However, these products were used by business customers. It would have had an adverse impact on the businesses, not only causing them to incur costs to change to the new product but also potentially changing their business operations.

Following consultations and discussion with the wider industry and BNET, the TRA has concluded that:

- BNET's Final Submission is approved. This delivers the services that are needed by business users and provides a time-commitment based price reduction of 20%; and
- BNET may withdraw a limited set of services that are not used by many users, subject to an appropriate implementation plan being approved by the TRA.

Other Issues

The process to approve the BNET Reference Offer has taken far too long. Over the period, Licensed Operators have gained more confidence in BNET and the engagement has matured. However, there are still competition concerns, and the TRA has needed to engage more than should be necessary in a well-functioning market.

The consultation process has shown that there is concern that BNET's overall return may be high for a regulated monopoly wholesale fibre business.

BNET needs to be able to withdraw products as both the market and technology changes. The current Reference Offer process is not appropriate for this purpose.

To ensure Bahrain continues to be the leading telecommunications market in the GCC and one of world's leading markets, the TRA will:

- Clarify the Reference Offer process so it becomes more efficient. Having due regard to the provisions of the Telecommunications Law and reserving all of its powers, the TRA will consult on the introduction of a new process to approve amendments to BNET's Reference Offer. The TRA will also amend the current Access Regulation to ensure it is appropriate to support the development of a competitive retail market, while recognising that BNET is a monopoly provider of fibre based wholesale services.
- Undertake a review of the appropriate model of regulation applicable to BNET; BNET will need to continue to invest in its network and operational systems to ensure Bahrain has, and continues to have, world class fibre infrastructure and services. While recognising the monopoly BNET will have in the provision of all national fibre services, its strategic importance to the Kingdom, its impact on all other telecommunications operators and services, and that the model used in Bahrain is currently globally unique; the TRA will review how BNET should be regulated in the future to enable it to meet the Kingdom's

objectives while making a reasonable return. The TRA will hold a workshop with international regulators and economists in early May. Industry workshops will be held in May and June.

- Ensure BNET is able to not only introduce new products but as market conditions and technology changes, it is also able to withdraw products. The TRA will consult on the introduction of a new process that enables products to be withdrawn while protecting the interests of both end users and other Licenced Operators. Discussions have been held with all stakeholders to amend the terms of reference and operation of the ECTC to enable it to become an industry-led technical committee for industry engagement and discussion on technical and process matters concerning the provision of services by BNET. The TRA is currently consulting on making these changes.

1 BACKGROUND

- 1 On 27 April 2021, the TRA published its findings and conclusions following its market review in the Wholesale Fixed Broadband and Wholesale Domestic Connectivity Markets in the form of a Determination paper (the “**Market Review**”).³ In the Market Review, the TRA identified two markets:
 - a. The Wholesale Fixed Broadband market; and
 - b. The Wholesale Domestic Connectivity Market.
- 2 The TRA determined that BNET holds a Dominant Position in both these markets. BNET was required to submit to the TRA a draft Reference Offer (“**RO**”) that reflects the conclusions of the Market Review and the reasonable requests and concerns raised by LOs.
- 3 On 29 July 2021, BNET submitted its first draft of the RO (the “**First Draft**”) to the TRA, setting out the terms, conditions and tariffs for products and services BNET proposes to supply to the industry. Following BNET’s change in management in November 2021, BNET withdrew the First Draft and held an industry workshop (the “**RO Week**”) between 28 November to 1 December 2021, allowing BNET to take on board LOs’ feedback on the First Draft.
- 4 On 23 December 2021, BNET submitted its second draft of the RO⁴ (the “**Second Draft**”) to the TRA, which according to BNET reflected the feedback received during the RO Week. The Second Draft proposed a change in wholesale prices and the removal of a number of services.
- 5 On 28 April 2022, the TRA issued for consultation the Second Draft (the “**April Consultation**”)⁵ and encouraged stakeholders to provide their views on the Second Draft and, in particular, to share any concerns they might have about both the services provided,

³ 2020 Determination of Dominance in Wholesale Fixed Broadband and Domestic Connectivity Markets. Available at https://tra-website-prod-01.s3-me-south-1.amazonaws.com/Media/Documents/Determinations_&_Decisions/20210427131208650_mvnqd1vc_fkh.pdf.

⁴ BNET subsequently submitted a number of amendments to the Second Draft RO including submissions received on 6 January 2022 and on 14 April 2022.

⁵ <https://www.tra.org.bh/en/article/public-consultation-of-BNET-draft-reference-offer>.

and the terms and conditions on which they are offered. The responses to the April Consultation were published on 7 July 2022 and are available on TRA's website⁶.

- 6 On 21 July 2022, TRA wrote to BNET outlining the concerns it had with the Second Draft. TRA encouraged BNET to submit a revised version of the RO considering both, the responses received during the April Consultation and TRA's concerns.
- 7 During this time, TRA held extensive discussions with stakeholders as well as BNET to fully understand the views and concerns of those involved, and to encourage BNET to make necessary amendments to meet LOs' reasonable requirements.
- 8 On 20 October 2022, BNET submitted a revised version of the RO (the "**Third Draft**") for TRA's further review. TRA issued further consultations in October and November 2022, specifically on the WBS and MDS-A (the "**October Consultation**"⁷ and the "**November Consultation**"⁸ respectively).
- 9 On 15 December 2022, BNET submitted a revised RO (the "**Fourth Draft**") to the TRA. The Fourth Draft was subject to further refinement with the latest and final version being submitted by BNET on 3 February 2023⁹ (the "**February Submission**").
- 10 On 7 February 2023, the Authority issued a statement outlining its views on BNET's February Submission (the "**February Statement**"). The TRA stated within the February Statement that it was minded to approve BNET's February Submission and issue an approval letter pursuant to Article 4.9 of BNET's Fixed Telecommunications Infrastructure Network Licence and Article 11(a)(1) of the Access Regulation. At the same time, the TRA also issued a consultation paper to give stakeholders the opportunity to review the February Submission and submit their views (the "**February Consultation**").
- 11 On 9 February 2023, BNET submitted a revised version of the February Submission to make some minor corrections.
- 12 On 1 March 2023, TRA received several responses to its February Consultation and it has considered the comments made. Submissions were received from: (i) Batelco; (ii) BNET;

⁶ <https://www.tra.org.bh/en/category/consultations>.

⁷ <https://www.tra.org.bh/en/article/public-consultation-on-the-draft-residential-wholesale-bitstream-services-tariffs-of-the-BNET-reference-offer>.

⁸ <https://www.tra.org.bh/en/article/public-consultation-on-the-draft-mobile-data-service-active-mds-a-of-the-BNET-reference-offer>.

⁹ Six refinements were submitted by BNET on 18, 23, 30, 31 January, 1, 2 and 3 February, collectively making up the Final Submission.

(iii) Etisalcom; (iv) Infonas; (v) Kalaam; (vi) STC; (vii) Viacloud and (viii) Zain. We would like to thank these operators for their extensive comments which we will address in the sections below. The TRA wishes to note that some of these comments have already been raised in earlier consultation responses. Most of these comments have already been addressed by the TRA as part of the RO review process. We will, however, reiterate our views on these old issues in this document.

- 13 On 14 March 2023, the Authority, having taken into account the responses received through the consultation process, requested BNET to make amendments to certain aspects of the February Submission.
- 14 On 28 March 2023, BNET submitted an amended version of the February Submission to address the concerns raised by the Authority (the “**Final Submission**”)¹⁰.
- 15 The table below summarises the consultations where the TRA engaged with concerned stakeholders:

Date	Consultation	Outcome
28 November – 01 December 2021	Industry workshop held by BNET after submission of First Draft	BNET considered industry feedback leading to the submission of the Second Draft of the RO
28 April 2022	Consultation on the Second Draft of the BNET Reference Offer	Having reviewed the responses to the Consultation, the TRA was of the view that the Second Draft RO required further changes before it could be approved
21 July 2022	Letter to BNET outlining concerns in relation to price and non-price terms contained in the Second Draft	Led to further discussions with BNET and stakeholders to discuss these concerns

¹⁰ Attached as Annex D.

August – October 2022	Multiple discussions held with stakeholders and BNET to fully understand the views and concerns of those involved, and to encourage BNET to make necessary amendments to meet LOs' reasonable requirements	BNET made changes to its draft RO and submitted the Third Draft
27 October 2022	Consultation on the draft residential Wholesale Bitstream Services (“ WBS ”) set out in BNET's Third Draft of the RO	The TRA, having taken into account stakeholder feedback through the consultation process, sought further amendments from BNET which led to BNET's February Submission
16 November 2022	Consultation on the draft Mobile Data Service – Active (“MDS-A”) price terms and service description set out in BNET's Third Draft of the RO	The TRA, having taken into account stakeholder feedback through the consultation process, sought further amendments from BNET which led to BNET's February Submission
7 February 2023	Consultation on BNET's February Submission.	The TRA, having taken into account stakeholder feedback through the consultation process, has requested BNET to make amendments to address concerns raised. The TRA is now issuing this Decision to approve the Final Submission.

2 SUMMARY OF OUR DECISION

- 16** For the reasons set out in this document and following our review of the points that LOs raised during the consultation processes, TRA is now approving BNET's Final Submission.
- 17** Our view is that the terms and conditions in the Final Submission are reasonable. The TRA views the tariffs submitted by BNET in the Final Submission satisfy the FRAND requirements. This notwithstanding, we benchmarked the WBS entry speed tariffs against other markets and found that the proposed pricing compares well.
- 18** FRAND terms are typically applied to situations where a product is an important input for certain downstream markets. In these situations, the supplier of that input may hold a degree of market power, so providing access on FRAND terms: (i) limits the extent to which such suppliers are able to take advantage of their market power, whilst (ii) allowing suppliers to (at least) recover the costs of their investment and maintain the incentive to produce such inputs.
- 19** However, what constitutes FRAND varies significantly from context to context. The concepts of "fair" and "reasonable" appear closely linked. One would be hard pressed to think of terms that are fair but not reasonable or reasonable but not fair. One interpretation of "fair" is to correct any imbalance of bargaining power between two sides and to replicate the outcome of negotiations in a competitive market – in other words, a "fair" deal for both sides. "Reasonable" terms of access, to the extent that there is any distinction to "fairness", might relate more to the price of access. For instance, does the price paid by the access seeker allow it to compete effectively in the downstream market and does the access provider have a sufficient incentive to continue producing this input at this price? If so, such a price might be considered "reasonable".
- 20** In its Review of the Wholesale Local Access Market Statement on market definition, market power determinations and remedies 2010, OFCOM stated that: 'We also consider that any pricing to be charged on a fair and reasonable basis under the network access obligations would be appropriate in order to promote efficiency and sustainable competition and provide the greatest possible benefits to end users by enabling competing providers to buy network access at levels that might be expected in a competitive

market.¹¹ We consider that the pricing proposed in the Final Submission satisfies these elements.

21 TRA takes note of the general reduction in prices for most wholesale services. TRA does view lower prices for wholesale network access as beneficial where this results in lower prices for consumers. In our view, the Final Submission is consistent with our primary strategic goal of ensuring that LOs can rely on high-speed networks to deliver fast, affordable broadband to consumers and businesses across the Kingdom. TRA is also alive to the concerns of some market participants that BNET's WBS prices could act as a catalyst for Batelco to lock-in its customers and creating, in the process, a barrier to competitors' entry and expansion in the market. TRA notes that Batelco, in its response, stated that it "*does not intend, and never has intended, to use any speed increase made on foot of BNET's new RO as an opportunity to lock customers into new contracts*" and that "*existing Batelco customers will not enter new contracts but will remain on their current contracts which will be unchanged save for the speed increase*". Regardless of Batelco's statements, the TRA will monitor market conduct by all market players and take the necessary measures to address any misconduct.

22 As part of this process, TRA has decided the following:

- The new RO would become effective as of 2 April 2023, which is the date of the Approval Letter.;
- BNET may not implement automatic upgrades of existing services but needs to first agree on an implementation plan with all LOs;
- BNET may withdraw services and speeds subject to an appropriate implementation plan that is approved by TRA;
- TRA will put in place a new more efficient process to approve proposed amendments to the RO;
- TRA will start working on implementing a new framework as to how BNET should be regulated in the future;
- In line with its non-discrimination obligations, BNET may not enter into any separate agreements with LOs that seeks to set charges that are different to those stipulated in the RO;

¹¹ Paragraph 5.81 (https://www.ofcom.org.uk/__data/assets/pdf_file/0027/37935/wla_statement.pdf).

- In line with its transparency obligations, BNET is required to ensure that every version of the RO will include a date and version number. In the case of any amendments (following approval by the TRA), BNET will be required to maintain a marked version of each version of the RO showing tracked changes in respect of the former version; and
- TRA will write separately to Batelco to ensure that it does not unnecessarily lock-in customers wishing to take advantage of BNET's Final Submission to offer higher speeds at the same price.

3 STATUS OF THIS DECISION

Purpose

- 23** This section sets out the process leading to an approval of BNET's RO. This decision has followed a thorough consultation process which the TRA is required to undertake pursuant to the BNET Licence, the Access Regulation and the Telecommunications Law (the "Law") and takes into account the submissions received in response to the consultation documents.

Our duties under the legal and regulatory framework

- 24** In undertaking its review of the BNET RO, TRA has been mindful of its duties and obligations set out under the Law and the Access Regulation and has, in furtherance of that objective, undertaken a number of consultations and extensive engagement with stakeholders in order to fully understand their views on the RO and the needs of the Telecommunications market balancing the needs of stakeholders, businesses and consumers with BNET's own interests.
- 25** The TRA considers that adopting the approach explained in this section meets its duties under Articles 3 and 57 of the Law, the Access Regulation and Section 4.9 of the BNET Licence. This includes its principal duty to protect the interests of consumers in relation to the availability, quality and tariffs of telecommunications services, as well as its duty to promote effective and fair competition among new and existing LOs. In particular, we have done this by following the appropriate process laid out in the Access Regulation, which sets out how the TRA imposes access obligations on a LO that has been determined to hold a Dominant Position in a relevant market.
- 26** Article 57(e) of the Law sets out the relevant legal framework and provides that:
A Public Telecommunications Operator in a Dominant Position shall offer upon request Access to its Telecommunications Network on fair and reasonable terms to any Licensed Operator. Such operator shall only be under an obligation to offer Access to the ducts if the Authority considers that there is an essential need for such Access.
- The Authority may publish regulations with regards to Access, including a regulation concerning the reference Access offer similar to a reference Interconnection offer.*

If the Authority considers the tariffs and the terms and conditions on which Access is offered by an operator in a Dominant Position are unreasonable, it may determine such tariffs and terms and conditions as it considers appropriate, and the provisions of paragraph (b) of this Article shall apply in this respect.

- 27** This is further reinforced in Article 3(c)(13) of the Law, which gives the TRA the power to encourage, regulate and facilitate Access, including where necessary, enforcing the sharing by Public Telecommunications Operators of the benefit of facilities and properties.
- 28** Section 4.9 of the BNET Licence requires BNET to submit a draft RO for the TRA's approval setting out the terms, conditions and tariffs for the products and services that BNET is required to supply to other LOs. Section 4.9 also provides that the TRA will either issue a relevant approval letter or a Reference Offer Order specifying the terms of the draft RO and the process and timeline for resubmission of a revised draft RO by BNET to the TRA for its approval.
- 29** In accordance with Article 9 of the Access Regulation, the TRA must review the draft RO, taking into account whether the terms and conditions including tariffs of the draft RO are fair, reasonable, non-discriminatory, in compliance with the Law, and consistent with any relevant position papers, guidelines or other instruments issued by the TRA.
- 30** Article 10 of the Access Regulation states that where a draft RO proposes material amendments, the TRA will publish that draft RO for consultation together with the reasons as to whether it proposes to approve the draft RO or not.
- 31** Section 4.10 of the BNET Licence and Article 13 of the Access Regulation require BNET to publish the RO within two (2) weeks of the issuance of the approval letter.
- 32** In accordance with Article 12 of the Access Regulation, the RO shall be effective from the date specified in the approval letter.

RO review process

- 33** In accordance with the process laid out in the Access Regulation and the BNET Licence, the steps to approve the RO are as follows:

34 Step 1: BNET submits a draft RO to TRA, which TRA reviews.

The First Draft was submitted to the TRA on 29 July 2021, was then subsequently withdrawn due to change in management, following which BNET proceeded to hold the RO Week between 28 November and 1 December 2021 to consult with stakeholders. The Second Draft was submitted to TRA on 23 December 2021 and was published for consultation on 28 April 2022. A second consultation on the draft Residential Wholesale Bitstream Service tariffs set out in BNET's Third Draft of the RO was published for consultation on 27 October 2022, and a third consultation on the draft MDS-A price terms and service description set out in BNET's Third Draft of the RO was published for consultation on 16 November 2022 (these two consultations relate to the Third Draft). The February Submission was submitted to TRA on 3 February 2023¹² and was published for consultation on 7 February 2023. The Final Submission was submitted to TRA on 28 March 2023.

35 Step 2: If the TRA approves the draft RO as submitted, the TRA issues an approval letter.

The TRA, for the reasons set out in this decision, is approving the RO as set out in the Final Submission and is therefore issuing an Approval Letter. The TRA notes that the Final Submission will not be subject to consultation as the TRA considers that the amendments made in comparison to the February Submission are not material in nature and the TRA does not expect the changes to have a significant impact on the telecommunications market.¹³

36 Step 3: Once the RO has been approved, BNET must within fourteen (14) days of the date of the issuance of the approval letter:

1. publish the approved RO in accordance with the terms of the BNET Licence; and
2. offer the products and services in accordance with the approved RO to all LOs from the date set out in the approval letter.

¹² Refinements were submitted by BNET on 9 February 2023, these were shared with the stakeholders.

¹³ Refer to Article 10 of the Access Regulation "If a draft Reference Access Offer proposes **material** amendments that would have an effect on a particular Telecommunications market or if it was the first draft Reference Access Offer submitted by the Access Provider [...], the Authority shall publish the draft Reference Access Offer for consultation".

4 THE TRA'S DECISION

Throughout this section TRA has sought to address the more salient points raised by the LOs.

4.1 **BROADBAND SERVICES FOR CONSUMER AND BUSINESS CUSTOMERS**

In this section the TRA sets out its decision in relation to the broadband services for consumers and business customers, specifically the Wholesale Bitstream Service ('**WBS**'). The Table below summarises the TRA's current views.

Table 1: Summary of the decision in relation to broadband services for consumer and business customers

Service	Schedule	Current View
WBS	Price Terms 3 (1D)	The TRA believes that the revised pricing structure addresses the concerns raised by operators in relation to them being unable to sustain the current level of pricing. The TRA is confident that the price reductions at the wholesale level will benefit consumers.
	Service Description 6.1	Mobile network operators raised other considerations and made proposals which are addressed in detail in the Annexes to this document. BNET has also satisfactorily addressed the concerns raised by stakeholders and the TRA on the enforced differentiation between business and residential customers.

4.1.1 WHOLESALE BITSTREAM SERVICE (WBS)

- 1 The WBS is a service which enables LOs to provide high speed products and services to their customers via connections over a digital pathway across BNET's Network.
- **Summary of the responses received during the February Consultation and the TRA's views**
- 2 Zain and stc expressed concerns that the proposed WBS wholesale charges would enable Batelco to foreclose the market by locking-in its customers through granting them the option to upgrade their service packages.
- 3 TRA analysed Zain and stc's concerns at length in Annex A. In the February Consultation, we said we would write separately to Batelco about this concern. However, stc commented that it considers the TRA's stated measure as unsatisfactory. stc calls for transparency and impartiality in this regard especially because, according to stc, the TRA failed to effectively monitor Batelco to ensure compliance with its decision on anti-competitive conduct. The TRA disagrees with stc. TRA has guidelines on such matters and it follows them. In any case this matter falls outside the scope of the review of the RO.
- 4 stc reiterated its argument (in previous consultations) that the pricing of the WBS 100 Mbps will "reinforce the dominant position of Batelco" and calls for the introduction of a glide path so that price reductions for WBS circuits would be implemented over a period of two years from the introduction of the new RO. TRA also analysed this concern in Annex A. It does not consider stc's concerns to be justified but considers BNET's proposals to be better for consumers and end-users than stc's glide path proposals, as BNET's proposal would result in lower prices for consumers than stc's proposal.
- 5 stc further claims that the WBS pricing seems to have been set arbitrarily and that the TRA has not considered intra and intercompany cross-subsidisations. The TRA has addressed concerns about potential cross-subsidisations in Annex A¹⁴ and does not consider stc's concerns to be justified. We do not understand stc's concerns regarding inter-company cross-subsidisations as stc did not provide specific details but note, however, that BNET is a separate legal entity.

¹⁴ See paragraphs 3.50-3.52

- 6** Several LOs requested clarity in relation to BNET's proposed upgrades regarding 50Mbps, 100Mbps and the 250Mbps speeds. Kalaam argued that BNET does not specify a mechanism for the implementation of upgrades, the period during which this should occur and proposes that an implementation plan be part of the RO.
- 7** BNET will automatically implement circuit speed upgrades from 50 Mbps circuits to 100 Mbps at the existing 50 Mbps price of BD/month 7.02 and from 250 Mbps to 300 Mbps at the existing 250 Mbps price of BD/month 21.52, after agreeing an implementation plan with LOs. For the avoidance of doubt, these upgrades will happen without a variation in the wholesale prices, which will remain unchanged. This does not mean that end-users will automatically be upgraded to the said speeds; it will then be up to LOs to upgrade their customers and the timing of such upgrades. This will provide LOs with control over their offerings to customers. BNET is not permitted to automatically upgrade any circuit from 100 Mbps to 200 Mbps or from any other speed to another within the current RO approval process.
- 8** Regarding Kalaam's point, we do not consider that implementation plans should be included within the RO.
- 9** A few operators comment on the low upload speeds for the WBS Advanced, with some noting that they are lower than for the equivalent (download speed) WBS Essential and request that they be increased. BNET has revised the upload speeds as per the table below. The new upload speeds are higher than those for the equivalent (download) speeds for Essential. We find this revision to be reasonable.

100 Mbit/s downstream / 20 50 Mbit/s upstream
250 Mbit/s downstream / 50 125 Mbit/s upstream
500 Mbit/s downstream/ 100 350 Mbit/s upstream
1 Gbit/s downstream / 200 1 Gbit/s upstream

- 10** Kalaam proposed the introduction of a framework within the RO to ensure that BNET is obligated to meet the 10-day target to provide connectivity to every home. We do not believe that a framework is necessary. The definition of 'home passed' is if a home is

claimed to be passed, BNET must be able to deliver services within 10 days. If BNET cannot deliver within 10 days, then it cannot claim the home is passed and this may impact its licence obligations to achieve its coverage obligations.

- 11** Kalaam and Batelco requested clarity on a sunset date for copper-based services. BNET also believes that TRA must define a sunset date for copper-based services. BNET's coverage obligations require it to cover 95% of homes and 100% of businesses. The current 95% target implies there will be situations where some homes are not covered. These may be locations where copper is needed. However, the TRA would assume where broadband over copper services are being used, this indicates there is demand for fixed broadband services. TRA would have expected BNET to prioritise these premises in its roll-out plan. If there is a customer using broadband over copper in a location where fibre service would be possible, TRA expects the service providers and BNET to migrate the customer to the fibre-based service. We expect this matter to be discussed between BNET and LOs in the ECTC.
- 12** Some operators commented on the WBS Advanced service. Kalaam asked for the re-introduction of lower speeds for WBS Advanced because not every SME will be willing to pay the price for 100Mbps. Batelco argued that the WBS prices are too high and should be reduced (Batelco proposed specific prices) and that discounts should be offered.
- 13** In the WBS October consultation, TRA shared its view that customers should have the freedom to choose between residential and non-residential WBS packages and selecting the package that best suits their needs in terms of characteristics and/or prices. In response to TRA's concerns, BNET's February Submission (consulted on in the February Statement) proposed changing "residential" and "non-residential" WBS packages to packages which are instead differentiated on technical characteristics and now rebranded "WBS Essential" and "WBS Advanced". This offers all end-users, including businesses, a wide range of packages with different characteristics at different prices.
- 14** Some operators argued that the proposed BD10 charge for the upgrade or downgrade of a WBS connection was unfair. BNET amended this to apply only in the event of a downgrade.
- 15** stc also requested confirmation that when an access seeker chooses to apply for premium service delivery, the applicable fee was 50 BD only and that therefore the standard

connection charge was not applicable on top. BNET has confirmed that in case of premium service delivery, no standard connection charge was payable over and above the 50 BD.

- 16 One operator requested the introduction of a 150 Mbps service. We would encourage LOs to engage with BNET to put their case forward when requesting new services in line with the process for new service requests.

- **Summary of the responses received during the previous consultation period**

Price terms

- 17 LOs raised many concerns regarding the proposed price terms and have proposed alternative pricing approaches. The TRA has considered and has provided its analysis to the price terms in a separate document annexed to this Decision – Annex A.

Non-price terms

WBS copper-based services

- 18 Zain commented on clause 4.1(a) “*the Access seeker may request that: the WBS Service is provided over existing copper cable...*” stating that all copper-based services should be stopped as the policy and direction is to move completely to a fibre network.
- 19 BNET has proposed in its February and Final Submissions to maintain certain WBS speeds (as further elaborated in Schedule 3(1D)), provided over copper infrastructure, for existing circuits which cannot be upgraded to the new fibre based WBS entry speed of 100 Mbps given the copper infrastructure limitations. BNET has confirmed that these will continue being made available for existing customers until fibre becomes available and migration can take place.
- 20 TRA was initially concerned by the fact that no mechanism was included to deal with copper circuits that could not be migrated to fibre due to its non-availability. TRA believes that through the inclusion of copper-based services in the February and in the Final Submissions, this concern has been addressed.

Cabling and civil works

- 21 The provision of a WBS service or the activation or transfer of the WBS Service includes the provision of cabling of up to 20 meters for the installation of the ONT. stc requested to change the maximum distance to 40 meters to accommodate for customer needs.

Upload/download speeds

- 22 Batelco suggested that the upload speeds of Non-Residential WBS should be considerably increased (in alignment with those of the Residential WBS) noting the recent major improvement in the upload speeds of Residential WBS (now Essential).
- 23 On the other hand, stc commented that there should be a distinction in the download speeds of WBS between Residential and Non-Residential and that the entry-level speed for Residential should remain 50 Mbps. BNET has removed the distinction between Residential and Non-Residential in the February and Final Submissions and the entry-level speed is 100 Mbps.
- 24 stc contended that Residential packages should have lower upload speeds starting from 20 Mbps which would put it at par with the Non-Residential upload speeds. BNET has, in its February and Final Submissions included 20 Mbps upload speed to the Essential category, for the 100 Mbps service.

Customers choice on residential/non-residential packages

- 25 In the October Consultation, the TRA clarified (and the LOs agreed) that the choice of whether customers buy a residential or non-residential WBS package is a choice for the retail service provider and its customers (irrespective of whether the customer is a corporate person that submits a Company Registration number or any natural person that submits an Identity Card, upon submission of a service application form) and not BNET.

Minimum number of VLAN's

- 26 In the February Consultation, the TRA suggested that a minimum of 4 VLANs to be provided as standard and any additional VLANs to be made available at a service charge.

- **BNET changes**

Price terms

- 27 BNET, throughout the consultation process,¹⁵ proposed various amendments to its price terms in relation to WBS, which include price variations and modifications of certain speeds. These changes and TRA's views on them are outlined in Annex A of this Decision.

Non-price terms

Upload/download speeds

- 28 BNET proposed changes to the download and upload speeds for both Residential (now Essential) and Non-Residential (Advanced) in its February Submission and has revised the upload speeds for Non-Residential (Advanced) as outlined in Schedule 3 of the Final Submission.

Rebranding residential/non-residential packages

- 29 In response to TRA's concerns raised in the October Consultation regarding the freedom of choice between residential and non-residential WBS packages, BNET, in its February and Final Submissions has changed "residential" and "non-residential" WBS packages to packages which are instead differentiated on technical characteristics. WBS packages have now been rebranded "WBS Essential" and "WBS Advanced".

Minimum number of VLAN's

- 30 BNET has increased the number of VLANs to be connected to a WBS Service to a minimum of 4 at no additional charge and any additional VLANs may be requested subject to a charge.

Copper-based services

- 31 BNET has removed clause 4.1(a) "*the Access seeker may request that: the WBS Service is provided over existing copper cable...*" in its entirety.

• **TRA's view on BNET's Final Submission**

- 32 TRA's analysis on the price terms can be found in Annex A and for the reasons mentioned there TRA propose to approve the proposed wholesale prices.

¹⁵ No changes to the MRC have been made after the February Submission other than a reduction to the 1 Gbps.

- 33** TRA agrees with BNET's proposal to rebrand the WBS packages to "WBS Essential" and "WBS Advanced".
- 34** TRA agrees with BNET's proposal to increase the number of VLANs to be connected to a WBS Service to a minimum of 4 at no additional charge. TRA considers that BNET should provide prices for additional VLANs, these should be fair, reasonable and non-discriminatory.
- 35** In response to the LOs' concerns regarding increasing the maximum cabling length, BNET stated that it cannot accept such increase of internal wiring free of charge as it involves significant material and civil infrastructure work costs. BNET has however reached out to other competent authorities responsible for urban planning and building regulation in Bahrain seeking their support in reserving and allocating corridors for fibre cable and setting technical standards and requirements for high-rise buildings to make sure that the in-building infrastructure is being provided as a default and meets the technical standards. TRA does not consider it necessary to increase the maximum free of charge cable length of 20 meters. TRA will also work with competent authorities to help ensure appropriate corridors are provided.
- 36** In response to the suggestion of including civil works as part of the RO, BNET clarified its position that it is not responsible for civil infrastructure in any existing or new buildings, it is the responsibility of the building owner/property developer. TRA's view is that BNET's position sounds reasonable. We note that BNET has an obligation to provide connectivity to every home within 10 days. We assume that BNET will work with LOs and building owners to ensure that this is achieved.
- 37** Batelco suggested that the upload speeds of Non-Residential WBS should be considerably increased (in alignment with those of the Residential WBS). stc commented that the download speed of WBS for Non-Residential starts from 100 Mbps. stc suggested that 50 Mbps should continue to exist. TRA considers that BNET's proposed change to the entry-level speed to 100 Mbps is acceptable for the reasons outlined in Annex A.
- 38** TRA agrees with BNET's removal of clause 4.1(a) in relation to copper-based WBS services. TRA considers that it is important to maintain an option for copper-based connections that cannot be migrated to fibre-based services due to service unavailability.

- 39** Following its review of BNET's proposals and taking into consideration the concerns raised by the LOs, the TRA is content with BNET's proposals on the price and non-price terms of WBS in its Final Submission.

4.2 SERVICES TO OTHER OPERATORS TO SUPPORT THE OPERATION OF THEIR NETWORKS

In this section TRA sets out its decision in relation to the services to LOs to support the operation of their networks, specifically MDS-A, FFS, CCLS, SP-Access and SNFM. The table below summarises TRA's current views.

Table 2: Summary of the decisions in relation to services to LOs to support the operation of their networks

Service	Schedule	Current View
MDS-A	Price Terms 3 (1A)	TRA believes that the tariffs in the Final Submission (which confirmed those in the February Submission) result in a marked savings for the MNOs when compared to the current RO pricing and also when compared to all previous RO Proposals. The restriction on the type of traffic proposed, has been removed which therefore addresses the TRA's and industry's concerns.
	Service Description (6.3)	
FFS	Price Terms 3 (1F)	Following TRA's review of BNET's proposals and taking into consideration the concerns raised by the LOs, the TRA is content with BNET's proposals on the price and non-price terms in its Final Submission.
	Service Description (6.4)	
CCLS	Price Terms 3 (1E)	
	Service Description (6.5)	
SP-Access	Price Terms 3 (1G)	
	Service Description (6.6)	
SNFM	Price Terms 3 (1H)	
	Service Description (6.7)	

4.2.1 MOBILE DATA SERVICE – ACTIVE (MDS-A)

40 The Mobile Data Service – Active (“**MDS-A**”) provides uncontended, symmetrical, dedicated point-to-point private leased circuit service within Bahrain between an Access Seeker’s Core Mobile Site and a Wireless Radio Site. BNET proposed in its submissions to merge the Data Service (“**DS**”) and Mobile Backhaul Service (“**MBS**”) into a single service, MDS-A.

- **Summary of the responses received during the February Consultation**

41 Zain argues that the proposed pricing structure together with the volume discount structure were unsatisfactory. In particular Zain contends that BNET’s proposal to only consider MDS-A circuits that are under a Minimum Service Period would qualify towards the volume-based discount to be unfair. Batelco also argued that all existing circuits should qualify towards the discount. We have engaged with BNET on this. BNET has clarified the applicable condition within Schedule 3 Section 1A to address the concerns.

42 Zain disagree with the proposed pricing structure of the MDS-A aggregation link. Zain states that 10Gbps aggregation links can only cater for a few radio sites. Deploying multiple 10Gbps aggregation links was neither technically nor financially efficient. Zain proposes that the MDS-A aggregation link should be set at 4X100Gbps by default and not charged separately. The charges for the 100 Mbps aggregation link for the MBS and DS, the products that have been merged in the MDS-A, were BD/month 1,141.17 and BD/month 718.15 respectively. BNET is proposing a charge of BD/month 718.15 for the 100 Mbps aggregation link for the MDS-A. In effect, Zain is requesting BNET offers 4x100 Mbps aggregation links for free, when 100 Mbps aggregation links, were always chargeable. We consider BNET’s proposal to be reasonable.

43 stc contends that the service description should be redrafted because there has been a change in the underlying technology from a dedicated leased line base to MPLS EVPN basis. Zain raised a concern about the EVPN for MDS-A. Zain complains about a lack of detail and clarity about how the protection configuration works and under what international standard(s). Zain believes that EVPN is used as the overlay control plane and provides virtual connectivity between different layer 2/3 domains over an IP or MPLS network and question how such a feature would ensure symmetric and uncontended circuits delivery. The TRA shares Zain’s and stc’s concern and given the purpose and

description of MDS-A would be interested to understand how this feature is compatible with this service.

44 Batelco argued that while “BNET alone should not dictate what type of traffic may be carried over a mobile network, [...] BNET’s RO should state, in clear and unequivocal terms, that MDS-A may be used for mobile backhaul only and nothing more”. Batelco further requests that the BNET RO include a governance model to ensure that traffic is carried over the appropriate wholesale product, to include setting out penalties for non-compliance. We disagree with Batelco and note that BNET has removed the restriction on traffic carried over MDS-A in response to concerns from both MNOs (including Batelco) and the TRA.

45 An operator commented it was not acceptable that the levels of protection at both the access and core network could be changed at BNET’s sole discretion. BNET, in its Final Submission has removed this discretion.

- **Summary of the responses during the previous consultation period**

Availability of speeds

46 TRA notes that BNET has addressed its concerns regarding the removal of speeds (namely 500, 1,500 and 2,500 Mbps) and welcomes the revisions submitted by BNET. Batelco proposed the inclusion of lower speeds (200-250 Mbps) to serve small cells and low traffic sites.

MDS-A aggregation link

47 TRA notes that in the April Consultation, there was an effective increase in the price of the MDS-A 100 Gbps aggregation link to BD 1,200 which constitutes a 5% increase compared to the equivalent aggregation link of the previous MBS and a 67% increase compared to the equivalent aggregation link of the previous DS. In its April Consultation TRA made it clear that it would not approve any price increase in the RO unless duly justified by BNET. In the absence of such a justification, TRA is unable to express its view on whether BNET’s proposed price is fair and reasonable. All three MNOs agreed with TRA’s position and reiterated, in their view, that the increase was unjustified.

MDS-A volume discount

- 48** In the April Consultation, BNET proposed a volume-based discount only for MDS-A new circuits. They also proposed removing some of the speeds which are currently used by LOs. The proposal would have resulted in LOs needing to change the speeds they currently use. In the Third Draft, all speeds were re-introduced but all discounts were removed.
- 49** All respondents to the November Consultation noted that the volume discounts proposed by BNET in the April Consultation were not included in the Third Draft which was consulted on in the November Consultation. Respondents requested the discount proposal to be reinstated. However, respondents assumed the discount would apply to all their circuits not just new ones. TRA's analysis on the pricing is captured in Annex B of this Decision.

Use of service limitation

- 50** BNET proposed to limit the service solely to the transport of traffic generated by International Mobile Telecommunications services. Zain disagreed with this limitation, citing financial burdens and inefficient network setup for MNOs. stc and Batelco also disagreed with this limitation and supported its removal. TRA's position as a matter of general policy remained that BNET ought not impose restrictions on what traffic can be carried over a particular type of connection.

Monitoring of service characteristics

- 51** With respect to Quality of Service ("QoS") parameters and monitoring of the same, the current RO differentiates between the parameters of the MBS and DS connectivity products in terms of different Round Trip Delay ("RTD") and Jitter QoS parameters. BNET proposed to include less stringent QoS parameters for MDS-A, compared to the WDC QoS parameters.
- 52** TRA noted in the April Consultation that BNET added a clause 1.5 to its MDS-A Service Description which effectively removes the continuous monitoring of the service's characteristics defined in clause 1.4 once the MDS-A has been commissioned and is in service.
- 53** TRA noted in the April Consultation that clause 1.5 should not be added, as it did not align with the current Service Level Agreement defined in Schedule 7 – Service Levels and clause 9 of Schedule 9 – Supply Terms.

- 54 Zain stated that BNET is the only party that has the technical capability from its network management system to identify different connectivity segments of the MDS-A circuit. Zain also noted that the current visibility does not provide insights regarding the connectivity performance, that it has encountered a number of outages over the current DS circuits and it would be easier to address issues if it had access to a dashboard which provides performance and connectivity status.
- 55 stc noted that BNET had removed the parameters of the monitoring tool that was provided to LOs which allowed them to monitor their MDS-A connectivity. They questioned BNET's removal of these parameters without providing justification.
- 56 Batelco supported TRA's position regarding clauses 1.4 and 1.5 of the MDS-A Service Description, and agreed with TRA that monitoring and testing ought to be ongoing to a reasonable extent.

Inclusion of service protection levels with associated charges

- 57 TRA does not oppose the proposed charges to the 'Full Geo Redundant Link', as TRA understands it consists of an additional circuit. TRA however urges BNET to continue working with its customers to ensure the protection levels it provides meets the changing needs of its customers.

Civil works costs

- 58 In its response, Zain disagreed with BNET's proposed clause 3.19 in the Service Description, which requires the Access Seeker to bear a portion of the civil work related to access fibre deployment. Zain stated that it is a policy mandate on BNET to connect to any radio tower upon request. Zain questioned the cost justification for charging BD 400 installation fees and claimed that the installation of an MDS-A circuit does not differ or take more effort than installing a WBS circuit where the latter is charged at BD 20 for installation.

Temporary service period

- 59 BNET proposed a new clause 3.7 in the Service Description which states: "*the Access Seeker may request the Access Provider to provide an MDS-A Service or upgrade an existing MDS-A Service for a Temporary Service Period (as defined) ('Temporary MDS-A Service'). The Access Provider shall provide the Access Seeker with sufficient technical*

detail to allow the Access Provider to review such request.” Zain argued that this could be misinterpreted or used as a blanket rejection tool by BNET and suggested that the text refers to the standard required information as per the Operation Manuals, similar to the normal service order.

- 60 Zain also disagreed with the proposed clause 3.8 which allows BNET to reject Temporary Service Requests. Clause 3.8 states that *“the Access Provider may reject a Temporary MDS-A Service if, the Temporary MDS-A is not commercially, operationally or technically feasible. The Access Provider reserves the right to reject the Temporary MDS-A Service if its duct network and / or civil infrastructure does not extend to the location where the Temporary MDS-A Service is being requested for.”* Zain argued that BNET is obliged to deliver 100% connectivity to Business and Mobile Radio Towers, and that therefore BNET is not in a position to reject a service request.
- 61 Finally, Zain argued that clause 3.10 which states *“the Access Seeker may request a renewal of the Temporary MDS-A for one or more Temporary Service Period(s) and agrees that such renewal shall be subject to the same charging mechanism [as set out in the paragraph above]”* is not commercially feasible as the Temporary Service Period is being charged at a 50% markup. Zain argued that it would be beneficial for BNET to renew another temporary term and an incentive for the Access Seeker to shift to a standard service period charging.

- **BNET changes**

- Price terms

- BNET proposed amendments, in its February Submission, to its price terms which include price variations, modifications of certain speeds and discount schemes.

- MDS-A aggregation link

- 62 Following various consultations and engagement with TRA, BNET reduced the price to BD 718.15 which corresponds to the price of the 100 Gbps aggregation link of the DS service. TRA believes this to be appropriate and accepts this position noting that MNOs have mainly utilised the 10 Gbps aggregation links (85% of total aggregation links). Furthermore, it is likely that in the future, MNOs will move to higher bandwidth aggregation links as data traffic increases.

- 63 BNET has also agreed to revert and keep the speed of 500 Mbps to serve small cells.

MDS-A volume discount

- 64 BNET has made the following price reductions to the MDS-A monthly recurring charges in the MDS-A pricing schedule in its February and Final Submissions, which TRA accepts. In its Final Submission BNET has also added the following clarification under the table on the MDS-A volume discount:

1A – MOBILE DATA SERVICE - Active (MDS-A)

MONTHLY RECURRING CHARGES

Bandwidth (Mbit/s)	MDS-A Connection Monthly Recurring Charge (BD)	Monthly Recurring Charge (BD) Volume Discount (in total equal or above 400)**
500	252.00	201.6
1,000	290.00	232
1,500	441.00	352.8
2,000	516.60	413.28
2,500	585.00	468
5,000	750.00	600
10,000	850.00	680

** Temporary MDS-A Service shall be charged at 50% mark-up on the requested bandwidth.*

*** To qualify for this volume discount, the following conditions must be met:*

- 1. The relevant Access Seeker has existing and active MDS-A Service Connection and/ or Service Orders placed for MDS-A Connection, which in total equal to or exceed 400 (as further described below) and this volume discount threshold of 400 in total must be maintained at all times; and*
- 2. With the exception of MDS-A Service Orders placed after the date of approval of the current Reference Offer, only existing and active MDS-A Service Connections that are under a Minimum Service Period of 24 months qualify for the purpose of application of this volume discount. For avoidance of doubts, any existing and active MDS-A Service Connection that are not under a Minimum Service Period of 24 months, would not be taken into account.*

Notwithstanding the provisions governing Minimum Service Period or Renewed Minimum Service Period, respectively, as set out in Schedule 6.3 (MDS-A), the Access Seeker may, within two weeks following the date of approval of the current Reference Offer (i) place Service Orders for new MDS-A Connection(s) and (ii)

renew the Minimum Service Period for any existing and active MDS-A Service Connections in order for these Connections to be under a new Minimum Service Period of 24 months, in which case (i) all Service Orders for new MDS-A Connection(s) and (ii) all the existing and active MDS-A Service Connections for which the Access Seeker renewed their Minimum Service Period within these two weeks, would qualify for this volume discount, and the relevant Access Seeker will benefit from this volume discount from the date of the approval of the current Reference Offer.

Such new (or renewed) Minimum Service Period will be considered as a 'Minimum Service Period' pursuant to Schedule 6.3 (MDS-A).

Non-price terms

Use of Service Limitation

- 65 In its February and Final Submissions, BNET has removed clause 3.2 which states that the MDS-A can only be used for the purpose of services authorised under an IMTL.

Inclusion of service protection levels and associated charges

- 66 In its February and Final Submissions, BNET has aligned the QoS parameters of the MDS-A with those of WDC. BNET has added clause 1.5, which states that the services characteristics defined in clause 1.4 “*are not continuously or repeatedly monitored and / or tested once the MDS – A has been commissioned and in service*”.

• **Authority’s view on BNET’s February and Final Submissions**

- 67 TRA’s analysis on the price terms can be found in Annex B.
- 68 Given the current state of the development of the market and in light of the forthcoming transitioning of LOs to BNET-provided fibre services, TRA sees a reasonable rationale for volume-based discounts for the MDS-A service. Volume-based discounts, which meet fair and reasonable conditions are in turn positive for customers as it gives them choice and various options. TRA accepts the volume-based discounts which BNET has included.
- 69 TRA notes that BNET has also addressed the discrepancies between the SLAs defined in Schedules 5 and 7 and the Service Description Schedules together with their associated Operation Manuals. TRA is content with BNET’s changes and accepts them.
- 70 In relation to the restriction on the use of the MDS-A service, TRA notes that BNET has removed the restriction.

- 71** TRA agrees that costs associated with civil works can be recovered by BNET.
- 72** With respect to the Temporary Service Period, specifically in relation to:
- a. Clause 3.7: TRA wishes to make it clear that it would intervene should BNET make any unreasonable rejection¹⁶ and that therefore it does not object to the proposed wording;
 - b. Clause 3.8: Seeing that BNET claims that it has 100% coverage, should there be any new areas in the future which it does not have coverage in, for example new mast sites, BNET will require additional time to roll out its network to these areas. In this case, if a request is submitted to BNET while it is in the process of rolling out its network, BNET has the right to reject said request for a reasonable period of time until it has completed its network roll-out;¹⁷ and
 - c. Clause 3.10: TRA does not find this to be unreasonable¹⁸ seeing that BNET has reintroduced the volume discounts.

¹⁶ Where Zain argued that clause 3.7 could be misinterpreted or used as a blanket rejection tool by BNET and suggested that the text refers to the standard required information as per the Operation Manual, similar to the normal service order – see paragraph 59 above.

¹⁷ With respect to Zain's argument in paragraph 60 above.

¹⁸ With respect to Zain's argument in paragraph 61 above.

4.2.2 FIBRE FRONTHAUL SERVICE (FFS)

73 The FFS is the point-to-point provision of one fibre pair between one Baseband Unit ("BBU") and one Remote Radio Head ("RRH") of the network of a LO.

- **Summary of the responses received during the February Consultation**

74 Zain disagrees with the proposed revisions to the service description as this would increase the cost significantly. The TRA has raised the concern with BNET who have amended the service description to charging per metre/fibre cable/month.

- **Summary of responses during the previous consultation period**

75 stc and Batelco requested to reduce the minimum period within the current RO under the FFS Service Schedule from 24 months to 12 months to cater for yearly demand by Access Seekers.

76 stc disagreed that BNET should have the unilateral right to investigate cases of "suspicion of breach" for limitation of using FFS for mobile traffic. stc argued that any suspicion of breach should be referred to the TRA for final adjudication. stc also suggested that access for the purposes of the investigation should be provided on a necessity basis only and only after TRA has provided the go-ahead on the investigation. Additionally, stc suggested that members of all three parties are present during this investigation, and that the investigation is for a limited and set period of time. Finally, stc opined that following an investigation, the service should be kept active until TRA reaches a conclusion.

77 LOs had concerns on the timeframes for the ordering and service delivery. Batelco suggested reducing the Solution Design Time to 15 working days and increasing the Confirm Proceed Time to 30 working days.

78 Zain disagreed with the service being charged based on fibre pair instead of fibre cable as it has the effect of exponentially increasing the cost of current and future deployments.

- **BNET changes**

- Price terms

- 79 The monthly recurring charges and the non-recurring charges applicable to FFS have not changed. However, the FFS charge basis has been modified from the current “per metre/per duct bore/month” to “per metre/per fibre cable/month”.

Non-price terms

- 80 BNET has added further clarifications to the purpose for which FFS may be used such that it has been made explicit that FFS may only be used “for the purpose of the services authorised under a duly issued Individual Mobile telecommunications Licence by the Authority”.
- 81 Other non-material changes were proposed to the service description of FFS including the inclusion of a process for investigation where there is a reasonable suspicion of a breach.

• **TRA’s view on BNET’s Final Submission**

- 82 In respect of the minimum service period, TRA notes that different views have been expressed in this regard. However, it believes that the instances when a LO would need to disconnect a particular site would be exceptional and that where these exceptional instances were to arise, TRA would expect that LOs could agree amongst themselves the most reasonable outcome.
- 83 With regards to the issue surrounding BNET’s right to undertake an investigation under clause 2.2, and stc’s subsequent comments, TRA notes that under clause 2.5, TRA’s approval is required prior to any remedial action can be taken by BNET. As such in TRA’s opinion, the inclusion of the TRA’s personnel at the investigation stage is not necessary.
- 84 TRA notes LOs’ comments in relation to the expected timeframes in Annex 2 of Schedule 6.4. TRA considers that the table in question represents the maximum contractual duration for each stage of the FFS application process. TRA is confident that given the importance of the FFS to facilitate good quality of services, BNET would endeavour to finalise the respective steps without undue delay.
- 85 Having considered the relative Service Schedule (Schedule 6.4) together with the corresponding pricing matrix, TRA approves the FFS Service Description (Schedule 6.4) and the corresponding price terms (Schedule 3 (1F)) of the Final Submission.

4.2.3 CORE CONNECT AND LANDING STATION SERVICE (CCLS)

- 86** The CCLS is a high-speed circuit that uses Dense Wavelength Division Multiplexing (DWDM) on BNET's dedicated fibre within the Kingdom of Bahrain between:
- a. Two Access Seeker Core Sites; or
 - b. (i) an Access Seeker's Core Sites and (ii) a Landing Station.

- **Summary of the responses received during the February Consultation**

- 87** stc argues that the CCLS under the February Submission only serves two very limited options between: (i) two core network sites of an operator; and (ii) a PoP and a CLS. stc calls for the reintroduction of this feature within the Final Submission. We note stc's concern, however, are of the view that PoP includes a data centre where such data centre is used by the LO to offer services. For the avoidance of doubt, the TRA would not believe locating servers at a customers' premises would be considered by any reasonable person as a data centre.
- 88** Batelco proposes to impose similar limitations and monitoring on traffic carried through CCLS to those it proposes for MDS-A. We disagree with Batelco's proposed limitations on the grounds that, apart from limiting the choice and efficiency of LO's operations, Batelco has not provided any (compelling) reason for its proposals.
- 89** Batelco, Etisalcom and Kalaam call for the introduction of lower bandwidths for the product, i.e. below the proposed minimum bandwidth of 5 Gbps, at prices that are lower than those proposed in the RO.
- 90** BNET initially proposed a minimum bandwidth of 10 Gbps and, in response to stakeholders' comments, reduced it to 5 Gbps. Should OLOs have further requirements, TRA encourages them to work with BNET to satisfy their connectivity requirements.
- 91** Kalaam further requests that the definition of Access Seeker Core Site should be broadened to accommodate the fact that some locations utilized can be leasehold/temporary ownership. We consider that the current definition does not exclude sites that are leased. For the avoidance of doubt, however, a core site cannot ordinarily be a customer premise.
- 92** Batelco argues that core sites should be restricted to sites owned and controlled by an Access Seeker without any language which allows for wider interpretation. We consider

that Batelco's proposal would prevent LOs from accessing the service in situations where they lease a site, which they are entitled to if that is the arrangement that best suits them.

93 Kalaam recommends that the Minimum Service Term should be reduced to 12 months. We do not agree with Kalaam, who has not provided a justification for its request. We note that the previous version of CCLS (OWS) also had a 24-month minimum contract.

94 stc also complains that the RO lacks the appropriate products. In particular stc notes that no dark fibre product has been included in the RO. We have already stated in our consultation that we will undertake a review of the portfolio of services BNET offers to other Licenced Operators to support the operation of their networks. This review will ensure BNET offers the appropriate mix of active and passive products at pricing that not only enables Bahrain to have world class fibre-based services, but also continues to have world leading mobile services at competitive retail prices. We will deliver this review in the shortest time possible.

95 Batelco commented that retail operators should be given a wider choice of protection levels and requested that BNET reintroduces the "Silver", "Gold", and "Geo Redundancy" levels. We address this point at paragraph 106.

96 Batelco believes it is necessary to include, in Schedule 6.5, a clear demarcation point of CCLS service in the Cable Landing Station to eliminate potential ambiguities in the future. Batelco, however, does not specify what such ambiguities can be. We do not consider that CCLS overlaps with Batelco's international connectivity services.

- **Summary of responses received during the previous consultation period**

97 BNET received requests from stakeholders during the April Consultation to include additional bandwidth options for CCLS to better accommodate their requirements¹⁹.

98 During the April Consultation, some LOs requested that speeds below 10 Gbps be made available for CCLS. These Operators argued that they do not have access to connectivity products accessible to the MNOs, such as MBS (now under MDS-A), which offers more granular speed packages.

¹⁹ Refer to Etisalatcom response to the April Consultation, p.2. Available at <https://www.tra.org.bh/en/article/etisalatcom-response-to-the-consultation-of-BNET-draft-reference-offer>.

99 Several stakeholders commented about the technical designs, specifications and differentiations between the proposed Protection Levels in the Second and Third Draft of the RO. For instance, stc requested that the protection should be end-to-end whereas the wording proposed by BNET only covered the last mile. Zain suggested that the protection within BNET's core and OTN networks was enabled by default at no additional charge and that enhancements be made to the Silver and Gold protection levels. BNET amended its April Proposal.

- **BNET changes**

Price Terms

100 In its February Submission (confirmed in its Final Submission), BNET proposed the following price reductions compared to the 2019 RO:

- a. OTU3/ 40GE reduced from BD 4,524.00 to BD 3,300.00 (a 27% price reduction); and
- b. OTU4/ 100GE reduced from BD 7,646 to BD 6,300 (a 18% price reduction).

Inclusion of service protection levels with associated charges

101 BNET, in its Second Draft, added Silver and Gold Protection Levels for each domestic connectivity active service (MDS-A, WDS and CCLS). In the Third Draft, BNET added another protection level, the Geo-redundancy. The charges associated with these protection levels are represented in the table below:

Type of Protection Level	Monthly Recurring Charge (BD)
Silver Protection Level	Additional 30% charge on top of the applicable MRC of the requested Bandwidth per connection or per aggregation link
Gold Protection Level	Additional 50% charge on top of the applicable MRC of the requested Bandwidth per connection or per aggregation link
Geo redundancy	Additional 70% charge on top of the applicable MRC of the requested Bandwidth per connection or per aggregation link

Source: BNET draft RO submission consulted on in April 2022 & BNET's submission of 20 October 2022

- 102** In its February Submission (confirmed in its Final Submission), BNET replaced the various Protection Levels with a single “Full Geo Redundant Link” described “as a separate ... Connection and charged at the applicable MRC” and provided more technical information. The charge for this protection level is a 100% markup on the MRC for CCLS.

Non-Price Terms

- 103** In its February Submission (confirmed in its Final Submission), BNET introduced four new options (underlined) to the CCLS bandwidth available to LOs. The CCLS now includes the following bandwidth options:

- a. 5Gbit/s;
- b. 25Gbit/s;
- c. 50Gbit/s;
- d. OTU2/10GE;
- e. OTU3/40GE; and
- f. OTU4/100GE.

• **TRA's view on BNET's Final Submission**

- 104** TRA considers that BNET has addressed the major points raised during the consultations and industry engagement with regards to the CCLS.
- 105** Wholesale price reductions enable both consumers and businesses who buy products in the retail market to benefit from better prices and potential new service packages. As stated in the various consultation documents, TRA is in favour of price reductions for both wholesale broadband and wholesale domestic connectivity services and accordingly approves the price reductions proposed by BNET.
- 106** TRA does not oppose the proposed charges to the ‘Full Geo Redundant Link’, as TRA understands it consists of an additional circuit. TRA however urges BNET to continue working with its customers to ensure the protection levels it provides meets the changing needs of its customers.

- 107** TRA also notes that BNET has addressed the discrepancies between the SLAs defined in Schedules 5 and 7 and the Service Description Schedules and their associated Operation Manuals. TRA is content with this proposal on the understanding that BNET is required to continuously meet these QoS parameters and not just meet them at the time the service is delivered.
- 108** BNET has included new bandwidths to the CCLS service and TRA considers it an improvement that should benefit users. TRA welcomes BNET's proposal to introduce new speeds including the 5 Gbps speed. Moreover, BNET is also offering a physically redundant and diverse option to enhance the resiliency of the network. This protection type provides LOs with two different and geographically diverse routes end-to-end including two different CPEs.

4.2.4 STRATEGIC PARTNER ACCESS SERVICE (SP-ACCESS)

109 The SP-ACCESS service grants LOs access over BNET's Facilities (as defined) to facilitate the provision of services to a designated Strategic Partner in the Kingdom of Bahrain.

- **Summary of the responses received during the February Consultation**

110 The Authority notes that, in the February Consultation, there were no major comments raised with regards to SP-Access. Batelco requested the clarification on whether the minimum service period is 24 or 60 months. The Final Submission makes clear that it is at the discretion of the access seeker, however, different prices apply depending on the length of the minimum service period (see Schedule 3).

111 stc requested justification for the shift in pricing from fibre cable to fibre pair. BNET, in its response, clarified that for SP-ACCESS, it charges only for the fibre pair rental. There was never any Ex-FAS fibre cable rental. It was always duct rental, and as such there is no increase in price. There are two possible scenarios for SP-ACCESS when it comes to use of dark fibre:

a) Existing fibre cable in which case the LO is allocated 1 fibre pair for which it is only charged the rental.

b) Where there is no fibre cable in which case bnet procures all fibre material and installs new fibre cable and allocates one fibre pair to the Access Seeker. As the minimum term should be 60 months, BNET does not charge any material or installation. Only the rental and the application fee.

- **Summary of responses received during the previous consultation period (on what was previously Schedule 6.7 (FAS))**

112 Zain commented that the timeframes for processing ExFAS requests are unnecessarily lengthy²⁰ and requested that the process be amended. In its February Submission, the process for ExFAS was amended to better reflect, according to BNET, its nature and scope and re-designed the existing process to address comments received.

²⁰ See Zain's response on Schedule 6.6 available at <https://www.tra.org.bh/en/article/zain-responses-to-the-consultation-of-BNET-draft-reference-offer>.

- **BNET changes**

Price Terms

- 113 BNET proposed an increase in the Site Space Charge from BD 25 to BD 100 per SQ meter/site/month for space occupied or rendered unusable to account for real estate value increase.
- 114 BNET proposed to change the method by which fibre charges are to be calculated from a BD/month/meter basis to a BD/meter/month/fibre pair in line with international benchmarks.

Non-Price Terms

- 115 BNET's proposal sought to amend what was previously Schedule 6.7 of the current RO (Facilities Access Service) by retaining only the exceptional facilities access service ("ExFAS") to End Users that are Strategic Partners to the Kingdom (now renamed as "SP-ACCESS").
- 116 BNET has, in its Final Submission, introduced an 'Early Termination' section which sets out the formula for calculating early termination charges.

- **TRA's view on BNET's Final Submission**

TRA believes that BNET has sufficiently addressed the concerns raised by both stakeholders and TRA., TRA approves the SP-Access Service Description (Schedule 6.6) and the corresponding price terms (Schedule 3 (1G)) as set out in the Final Submission. TRA notes however that BNET is currently providing duct access to LOs at the price of BD 0.189 per meter/ month. BNET can only provide services that exist in the RO.

4.2.5 SERVICE NODE FACILITIES MANAGEMENT SERVICE (SNFM)

118 The SNFM Service allows access to BNET's Service Nodes offered in combination with any other relevant RO Service.

- **Summary of the responses received during the February Consultation**

119 The Authority notes that, in the February Consultation, there were no major comments raised with regards to SNFM.

- **Summary of the responses received during the previous consultation period**

120 TRA notes that BNET erroneously omitted Schedule 6.7 from its submissions and as a result it was not consulted on. The service schedule was included in the February Submission.

- **BNET changes**

Price Terms

121 BNET, in its February Submission, proposed a number of changes to the charges associated with SNFM. These changes include:

- a. Removal of SNFM Order and Cessation Charges (BD13.65 /per event);
- b. Removal of Reject, Reversal, Withdrawal Charges (BD 5 /per event);
- c. Addition of Processing Access Application Fee (BD 100/per application);
- d. Addition of Reprocessing Fee (BD 50/per resubmission or amendment of application); and
- e. An increase in the Additional Power Charge to BD 300/per kW per year (currently BD 70/per kW per year).

Non-Price Terms

122 BNET, in its February Submission, proposed to remove the Dedicated Access Seeker Space and Licenced Shelter Space from the scope of the SNFM service schedule. It also proposed to remove the priority policy in clause 8.

- **TRA's view on BNET's Final Submission**

123 Having reviewed the SNFM service description and compared it against the equivalent schedule under the current RO, TRA believes that the changes proposed by BNET to the

non-price terms are not material. TRA does not believe therefore that they are unfair. Insofar as the proposed variation of the applicable charges, TRA notes that BNET has removed quite a few chargeable activities and added some others. On balance TRA has no reason to believe that these charges are unreasonable. TRA does note the substantial increase in power charges, but TRA does appreciate that energy prices have increased across the globe. TRA approves the SNFM Service Schedule and the corresponding charges.

4.3 SERVICES TO SUPPORT BUSINESS CONNECTIVITY

- 124 In this section TRA sets out its decision in relation to the Service to support business connectivity, specifically WDC. The Table below summarises TRA's decision.

Table 6: Summary of decision in relation to Service to support business connectivity.

Service	Schedule	Current View
WDC	Service Description 6.2 Price terms (1B)	TRA's view is that the prices in the terms and conditions of WDC satisfy the FRAND requirements and as such TRA approves them.

4.3.1 WHOLESALE DATA CONNECTION (WDC)

- 125 The Wholesale Data Connection ('WDC') Service provides symmetric, synchronous, dedicated and uncontended data connectivity within the Bahrain between:

- two of the Access Seeker's Point of Presence; or
- an Access Seeker's Point of Presence and its End User Premises; or
- an Access Seeker's Point of Presence and the Point of Presence of another LO; or
- point to point between two End User Premises of the same Access Seeker with an additional 50% premium charge on the MRC of the requested WDC bandwidth.

- Summary of the responses received during the February Consultation

- 126 Zain states that it disagrees with the practice of auto-renewal for another minimum commitment period on the basis that it would have an adverse impact on the commercial terms that access seekers can offer to their respective clients. We have reviewed the relevant provisions within Schedule 6.2 (including Annex 6). We do not agree that the auto-renewal would have adverse impacts bearing in mind that the Renewed Minimum Service Period is a term of one month. It is common that in wholesale contracts of this nature, the provision of services continues seamlessly after the expiration of the fixed contractual term until such time as notice of termination has been granted. The notice of termination contemplated under clause 2.9.5 of Annex 6 of Schedule 6.2 is one month.

We do not find the notification term to be exceptionally long. Therefore, we do not think it is unreasonable.

- 127** Zain disagrees with the process proposed for VIP customers insofar as it requires a valid written justification from the TRA. We agree with Zain that we do not need to be involved and therefore, we encourage the LOs to agree on a process during the ECTC.
- 128** Zain contends that in the case of a change location request for a WDC service, the requirement to prove that the service is provided to the same end-user should be irrelevant to BNET because the access seeker manages the relationship with the end-user. Zain proposes that, in order not to allow for circumvention of payment, access seekers would be required to sign up to a minimum commitment period when submitting a change request. TRA considers that a change in the identity of the end-user does not qualify as a relocation.
- 129** Zain disagrees with the proposal for BNET to provide a “Point to Point of an Access Seeker’s End User premises” WDC connection without transiting the access seeker’s network. We understand some Access Seekers may wish to have Point to Point connections that do not transit through their access network. We also understand that Zain still has the option to provision direct Point to Point connections. We believe that Zain’s concern is related to its ability to comply with lawful access requirements, however we do note that it is a matter for the Licensees to ensure they comply with any obligation they might have.
- 130** stc and Etisalcom disagree with the 50% mark-up for pricing of point-to-point WDC connectivity between two end-users. We note that, unlike a standard WDC connection, a point-to-point WDC connection requires duplication of CPEs and access network connection. BNET therefore incurs additional cost relative to a standard WDC connection, which it needs to recover.
- 131** Batelco, Etisalcom and Kalaam all state that the time commitment discount proposed within the RO should apply across the board and not just to selective speeds. BNET already offers discounts. Where Licensed Operators have further requirements, we encourage them to engage directly with BNET to address their requirements.

- 132** stc, Kalaam and Batelco opine that temporary WDC services should not be charged a premium and the proposed 50% mark-up was unjustified. BNET said it incurs certain costs when provisioning WDC (“especially assets and dismantling of the connection” when terminated) which, for ‘standard’ term WDC circuits, it recovers through the MRC over the 12-month minimum contractual period. For temporary WDC, BNET argues that the contractual period is not long enough to enable it to recover such costs through the MRC, meaning that it needs to charge an additional premium.
- 133** We note that this kind of pricing is common with many businesses, in many sectors. For example, per usage retail telecom services are generally more expensive for prepaid than for postpaid that typically carries a 12 or 24-month minimum contract period. Batelco reiterated its comments in relation to the temporary WDC service periods that these should range from one week to one month, arguing that it derives from end-users requirements and needs to be reflected in the RO. We agree with Batelco and we note that this has been reflected in the Final Submission.
- 134** stc argues that the price proposed for the geo-redundancy link was excessive and that it should be charged at a maximum of 70% of the MRC, in line with alleged international benchmarks. Batelco and stc argue that a choice of protection levels, in particular the “Silver”, “Gold” and “Geo Redundancy” protection levels should be re-introduced. Zain contends that the Access Seeker should always be able to procure a “full aggregated geo redundant link”. As we explained in paragraph 106, a geo redundancy link consists of an additional circuit, therefore it is reasonable for BNET to charge for the extra circuit.
- 135** BNET has clarified that existing end-to-end physical and logical protection on WDC connections will continue to be supplied at the current 30% premium charge. Therefore, customers with existing protection will neither see that product withdrawn, nor face an increase in charges. BNET has, to that effect, added the following text in Schedule 3: “*Any particular WDC Connection for which the Access Seeker requested and the Access Provider provided an end-to-end physical and logical protection before the effective date of the current Reference Offer (or its approval or issuance by the TRA, as applicable) shall continue benefitting from the same Charge for such additional protection (i.e., 30% premium on top of the applicable MRC for the relevant WDC Connection per month) as was applied before the effective date of this Reference Offer, until ceased by the relevant Access Seeker*”.

136 Infonas submits that OTN services should be included within the WDC service description. Infonas should engage with BNET to discuss such a request within the ECTC.

137 An operator commented that the right to reject a temporary WDC service was too broad. BNET accepted to reduce its discretion.

- **Summary of responses received during the previous consultation period**

Price terms

138 TRA notes that a few LOs commented on the price terms. LOs stated that the charges in the April Consultation on the 10 Mbit/s were too high and suggested that the tariffs charged under the current RO be retained. In its February Submission (confirmed in its Final Submission), BNET has reverted to the charges under the current RO.

Non- price terms

Additional 50% premium charge

139 stc and Batelco did not agree with the additional 50% premium charge on the MRC in clause 1.1(d). Moreover, in stc's view, the proposed premium charge was not justifiable because no extra costs were incurred by BNET.

Temporary WDC Service

140 Batelco commented on the definition of Temporary Service Periods, suggesting that they be flexible enough to include shorter periods of just days rather than the minimum period being one month. Batelco suggested a minimum period of one week where the price is $\frac{1}{4}$ of the MRC and a maximum term of 12 weeks.

141 stc stated that a failure to notify BNET should result in auto-termination of the temporary service and that LO's should be able to request the continuation of the service before the expiry of the temporary term.

142 Zain suggested that it should be the LO that determines when a Temporary WDC Service is required and not BNET.

Project based delivery

- 143 Zain did not agree with the definition of the term 'Project' as it believed that the definition should follow the normal operational process of service ordering and delivery. stc agreed with the definition but suggested a lower minimum number of WDC circuits to consider it as a project.

Protection levels

- 144 LOs had concerns over the levels of protection, TRA notes that BNET has since made changes to these.

Definition of relocation

- 145 Zain disagreed with the definition of 'Relocation', stating that end-user details were not relevant for the purpose of this product and that BNET is providing an infrastructure, to which Zain is willing to commit to a new minimum service period once a circuit is relocated to a new address. BNET clarified that the definition of 'Relocation' aligns with TRA's interpretation as set out in Decision No.12 of 2021.

Usage of additional ports

- 146 Zain requested clarification as to which scenarios would be applicable for the usage of additional ports on the WDC CPE to ingress LO traffic.

Removal of speeds

- 147 stc objected to the removal of speeds under 10Mbps on the grounds that this is likely to negatively impact customers requiring bandwidths below 10Mbps. stc argued that the removal of lower speed options may lead to either an increase of cost passed to consumers or absorption of cost by LOs.

Other concerns

- 148 It was noted that the Schedule referred to a 'Change Request' however, the definition of Change Request had been removed from Schedule 8.

- **BNET changes**

Price Terms

- 149** In its February and Final Submissions, BNET reverted to the charges that are applicable under the current RO in relation to WDC. Additionally, BNET is offering a time commitment discount.

Non-Price Terms

Project based delivery

- 150** In response to the concerns on the definition of Project, BNET has introduced language to state that the project-based delivery is optional. An LO is not obliged to take the option of a project and in such case the normal delivery service levels in Schedule 7 will apply. BNET, in its Final Submission, has amended the definition of Project to remove the minimum of 10 WDC Service Orders.

Temporary WDC Service

- 151** BNET has considered the requests made by LO's and has made the following changes:
- a. The requirement to have a predefined event has been removed and a LO may request a Temporary Service for its own purpose;
 - b. The minimum period for the Temporary Service is one week and a maximum of three months, however this is subject to a one month minimum applicable charge.;
 - c. A LO would be allowed to renew the Temporary Service for one additional temporary service period (between 2 to 3 months). Any further renewal would be considered a normal service at the normal rate for a minimum service period of 12 months; and
 - d. BNET considers that it is the responsibility of the LO to manage the temporary service and to notify BNET of its intention to terminate the temporary service.

Usage of additional ports

- 152** BNET has provided further clarification on the usage of additional ports. BNET clarified that any additional ports on WDC CPE can only be used for the purpose of a specific WDC connection and cannot be used to carry traffic or connect to any other service from the LO.

Protection levels

- 153 BNET has removed reference to silver and gold protection and has made changes to the section on protection, including the introduction of a ‘full geo-redundancy’.

Removal of speeds

- 154 BNET, in response to LO’s concerns has maintained speeds below 10 Mbit/s in its Final Submission.

- **The TRA’s view on BNET’s Final Submission**

Price-terms

- 155 TRA notes that the February and Final Submissions addressed the comment raised by industry. As such we have no reason to believe that the proposed charges are not FRAND.

Non-Price Terms

Removal of speeds

- 156 TRA was concerned about the possible impact on consumers with the proposed withdrawal of all WDC speeds below 10Mbps (63% of WDC circuits). BNET, in its February and Final Submissions, maintained the 64 Kbit/s, 128 Kbit/s, 256 Kbit/s, 512 Kbit/s, 1 Mbit/s, 2 Mbit/s, 4 Mbit/s and 8 Mbit/s WDC speeds. As this enables consumers to continue to get the services they need, TRA is content with BNET’s February and Final Submissions.

Project based delivery and usage of additional ports

- 157 TRA is satisfied with the clarification provided by BNET on the definition of the term ‘Project’ and the clarification provided on the usage of additional ports.

Additional 50% premium charge

- 158 It is difficult to see why BNET would feel the need to charge a premium for a service which is similar to the other service it provides in WDC We would expect BNET to work with its customers whenever such a service is requested to justify the additional costs and to charge the appropriate charge for the service.

Temporary WDC Service

- 159** TRA is satisfied with the proposals made by BNET on Temporary WDC Service.

Protection levels

- 160** TRA refers to paragraph 106 above, specifically on service protection levels.

Definition of relocation

- 161** TRA has reviewed the definition proposed by BNET and agrees that it does align with TRA's decision (Decision No.12 of 2021).

Definition of change request

- 96** BNET, in its response to the February Consultation has clarified that a Change Request refers to a request by the Access Seeker to amend the WDC service as specified in Clause 2.6 of the WDC Operations Manual (Request to Change).

5 COMMENTS RAISED ON OTHER ASPECTS OF THE RO

- 1 LOs raised a number of issues on the other schedules of the RO most of which have been addressed by BNET. The more material ones are identified below:

5.1 Cost- Model

- 2 stc and Zain argue that BNET's prices should be underpinned by a regulatory cost-model. Referring to Art 57 of the Telecommunications Law, they argue that tariffs should be based on forward looking incremental costs or by benchmarking in comparable Telecoms markets and further state that the position adopted by TRA in its February Consultation directly contrasts with the TRA's own thought process as manifested in its consultation paper on costing methodology. stc also contends that there has been little to no transparency as to why the cost-modelling project has been discontinued.
- 3 In the February Consultation, we recognised the monopoly BNET will have in the provision of all national fibre services and the fact that the model used in Bahrain is currently globally unique. Moreover, the sector is undergoing significant evolutions, including Batelco's migration from using fibre assets to BNET's RO products, negotiations between BNET and Licensed Operators for the transfer of their fibre assets.
- 4 As a result of the above, TRA is reconsidering whether TRA's position in relation the pricing model for BNET remains appropriate. We need to ensure that the appropriate regulatory model is in place to enable BNET to meet the Kingdom's objectives while making a reasonable return. We said we would review how BNET should be regulated in the future and expect to hold a number of workshops and provide some initial views on possible models in the first half of this year.
- 5 stc also argues that the TRA has chosen to ignore BNET's duties under its license to submit separate accounts for licensed services and activities. It is unclear how stc came to this conclusion given stc is not privy to communications between TRA and BNET on this matter. Nevertheless, the TRA wishes to emphasize that it is in receipt of accounting information from BNET.

5.2 Review of the retail fixed broadband market

- 6 stc urges the TRA to carry out an ex-ante review of the retail fixed broadband market urgently and immediately. They argue that competition in this market cannot be stimulated

until the market review is conducted as it would eliminate the source of market failures and mitigate their impact. Accordingly, in stc's view, the TRA should refrain from approving the BNET RO until both the cost-model and the market analysis have been completed.

- 7 stc appears to suggest that consumers and end-users in general should be denied the benefit of immediate lower prices. The BNET RO concerns wholesale services, not any retail service. As concerns the latter, we have a vibrant retail broadband market. As analysed in Annex A, the fibre broadband market, including residential and business customers, has been growing significantly since 2020. Batelco's market share has been steadily declining from 93% in Q1 2020 to 77% in Q4 2022. Batelco's two main competitors are capturing an increasing share of the net additions of residential customers.²¹
- 8 We want effective retail competition so that consumers have access to products and services that best meets their needs at competitive prices. Therefore, consumers should be able to choose the package that best suits their needs from the service provider of their choice. While we recognise consumers are switching service providers, it has been suggested that the level of switching appears low compared to the high level of advertising which has taken place. We will therefore undertake a study to identify if there are any barriers to consumers switching. However, we do recognise in a competitive market, consumers may be content with their current service provider.

5.3 **Schedule 1 – Main Body Terms**

- 9 Clause 1.3(j) – following the February Consultation, the reference to the Joint Working Manual has been removed on the basis that the reference offer does not include this document.
- 10 Clause 2.4(b) – following the February Consultation, the credit worthiness review has been amended to take into account the access seeker's history, capital and annual reports.
- 11 Clause 2.5(e) – following the February Consultation, the reference to 'authorisations' has been removed.

²¹ The share of net additions is a better indicator of the *current* state of competition, as opposed to market share in general which is heavily influenced by Batelco's *legacy* as the incumbent. The net additions combine both the net additions to the market (new fibre broadband customers) and fibre broadband customers moving from one operator to another.

- 12 Clause 2.5 – BNET originally sought to require LOs to provide a number of representations and warranties that would remain applicable throughout the term of the RO. TRA opined that in respect of some of these, such a request was unreasonable. BNET has accepted TRA's comments and has modified the requirement to apply as at the Agreement Effective Date (as defined).

5.4 **Schedule 4 – Billing**

- 13 Clause 2.3 – LOs requested that payment should be applicable as of the Actual RFS Date (as defined). BNET has made amendments to this clause by virtue of which invoicing would commence following the passage of 2 months from the RFS Date. In TRA's view, this represents a reasonable time window for the LOs to start using the Service ordered by it, following the expiry of which BNET can start charging the MRC.
- 14 Clause 3.2 – LOs requested that BNET should commit to the accuracy of its billing. BNET has amended this clause and inserted a new clause 6.3 to reflect this request.
- 15 Clause 5.4 – TRA suggested that the requirement by LOs to pay BNET (i) costs and (ii) a penalty for a suspension of a Service Order was onerous. BNET has amended this clause and limited the obligation to the payment of the costs actually incurred by BNET.
- 16 Clause 6.2 – TRA proposed that it was important that receipt of invoice should be confirmed. BNET accepted this proposal and has reflected this in the February and Final Submissions.
- 17 Clause 7.4 – The point was raised that LOs should not be obliged to effect payment of an invoice that was subject to a Billing Dispute (as defined). BNET has accepted this principle and made the requisite changes to the clause.
- 18 Clause 7.7 – BNET has refined the process for either party to be able to set-off a Credit Note by granting the Billed Party the right to use that Credit Note to set-off amounts payable under any subsequent invoice.
- 19 (ex) Clause 8 – LOs queried whether the charging of compound interest was allowed under national law. BNET has removed the entirety of clause 8 and therefore the contractual right to charge interest for late payment.

- 20 Clause 9.1 – LOs requested that the Billing Dispute Notification Period be extended. BNET has accepted to extend the period to 45 days.

5.5 Schedule 5 – Forecasting

- 21 Clause 1.1 – LOs requested the inclusion of a definition to the term ‘Service Commencement Date’, this has been added by way of footnote to clause 1.1.
- 22 Clause 1.9 – LOs argued that the non-applicability of SLAs for failure to submit forecasts was not reasonable. BNET modified the clause such that the non-applicability of SLAs is now limited to service delivery.

5.6 Schedule 7 – Service Levels

- 23 Preambles – TRA’s view was that the conditions precedent that had been proposed to be introduced were broadly unfair as they sought to further limit BNET’s liability for failure to meet the SLAs. In its February and Final Submissions BNET has removed the conditions in question.
- 24 Cap on Service Level Penalties – BNET sought to introduce caps to the Maximum Penalty (as defined). In the February and Final Submissions, those caps have been removed.
- 25 Level of Service Credits – LOs complained that the proposed SLAs were worse than what is in the current RO. In the February and Final Submissions, BNET reverted to the methodology and formula for calculating Service Credits that is in the current RO.

5.7 Schedule 9 – Supply Terms

- 26 Clause 1.5 – has been amended to clarify that any changes to the RO must be subject to the relevant process including approval from the Authority.
- 27 Clause 6.1 – LOs commented that the proposed notification period of 2 weeks for network alterations was inadequate. BNET amended the notice period to 30 days.
- 28 Clause 6.5 – It was suggested that any change to the underlying infrastructure, hardware, software or other technology or the specifications of the Services which adversely alters the functioning or performance of the Services should be notified to LOs in all instances

and not subject to a materiality threshold. BNET's February and Final Submissions have been amended accordingly.

- 29** Clause 7.2(e) – at the request of one of the operators, the reference to 'virus malware' has been removed.
- 30** Clause 7.6 – LOs argued that the limitation of BNET's responsibility for the supply of its services to the NTP (as defined) was not reflective of the fact that currently, BNET provided up to 20 metres internal wiring. TRA understands that the first 20 meters of fibre cabling is included in the applicable charges and that therefore this is not charged separately. The language in clause 5.2 of Schedule 1 is consistent with this understanding.
- 31** Clause 8.8 – BNET introduced time limits by when a Service Credit (as defined) could be claimed. In the February and Final Submissions, the time limits were increased.
- 32** Clause 11.4(d) – LOs argued that suspension or termination of the Agreement or Service (as defined) should only occur with the TRA's approval. BNET amended this clause to address LOs' concerns.
- 33** Clause 11.5 – LOs thought that the obligation to pay for Services when the Services were suspended through operation of clause 11 was unfair. Under the February and Final Submissions, payment obligations subsist in the event of a suspension of the Services only to the extent that the Service was suspended for reasons attributable to an Access Seeker (as defined).
- 34** Clause 15.10 – TRA invited BNET to reconsider the wording in this clause so that Service Credits should not be the sole and exclusive remedy for breach of SLAs. The wording in the February and Final Submissions has been modified to refer to applicable law to make sure that this is consistent with any requirement stemming from national law.
- 35** Clause 15.14 – Concern was expressed at the level of insurance that BNET had proposed to be introduced. BNET reduced the value of both the public liability and property insurances to BD 250,000 and BD 100,000 respectively.
- 36** TRA notes that Schedules 1, 4, 5, 7 and 9 of the Final Submissions have been substantially amended to reflect the main concerns raised by both the industry and the TRA. TRA approves these schedules.

ANNEX A – WBS PRICING ANALYSIS

(Attached separately)

ANNEX B- MDS-A PRICING ANALYSIS

(Attached separately)

ANNEX C- DEFINITIONS AND INTERPRETATION

1. For the purpose of interpreting this Decision, except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them in paragraph 2 below, and otherwise any word or expression shall have the same meaning as it has in the Telecommunications Law.
2. In this Decision –
 - **“Access Provider”** means Bahrain Network (BNET) B.S.C (CLOSED), which is licensed by the Authority to provide the services to Licensed Operators.
 - **“Access Regulation”** means the Resolution No. 7 of 2021 promulgating the Access Regulation.
 - **“Access Seeker”** means, in relation to any given service, the Licensed Operator that has requested the Access Provider to supply that Service.
 - **“Access”** means the making available of telecommunications facilities and/or telecommunications services to another Licensed Operator for the purpose of providing telecommunications services, and including the connection of equipment by wire or wireless means, access to physical infrastructure including buildings, ducts, cables and masts, access to mobile networks and access to number translation or networks offering equivalent functionality.
 - **“Authority”** means the Telecommunications Regulatory Authority established by virtue of the Telecommunications Law of the Kingdom of Bahrain.
 - **“Baseband Unit or BBU”** means the unit responsible for processing the baseband signals, where “baseband signal” refers to the signal from a Remote Radio Head that is unmodulated, via an optical interface.
 - **“BNET Licence”** means the Fixed Telecommunications Infrastructure Network Licence granted to BNET under Articles 29 and 40(bis)(a) of the Telecommunications Law bearing reference number LAD/0519/155 on 2 June 2019 and amended on 15 June 2022.
 - **“Cable Landing Station”** means the point at which any cable landed in Bahrain connects to another public telecommunications network within the Kingdom of Bahrain, including, but not limited to, buildings, equipment and land necessary to establish and maintain such connection.

- **“Core Network”** means a location in the Kingdom of Bahrain owned or controlled by the Access Seeker which hosts equipment for control functionality on its Network.
- **“CPE”** means equipment owner, controlled, operated or used by the Access Seeker, which is necessary to make use of the Service, but is not supplied by the Access Provider.
- **“Dominant Position”** means the Licensee’s position of economic power that enables it to prevent the existence and continuation of effective competition in the relevant market through the ability of the Licensee to act independently – to a material extent – of competitors, Subscribers and Users.
- **“ECTC”** means the equivalence compliance and technical committee established by the Authority pursuant to section 4.31 of the BNET Licence that will enable, among other things, LOs to discuss their needs and requirements, including technical requirements, with the Access Provider at regular intervals as described in the ECTC terms of reference published by the Authority on 07 November 2019, as amended from time to time.
- **“End User”** means the Licensed Operator’s customer, to whom the Access Seeker provides, or intends to provide, a service using the particular Service provided by the Access Provider as an input, whether a legal or natural person.
- **“EVPN”** means ethernet virtual private network.
- **“FRAND”** means the fair, reasonable and non-discriminatory requirements under Article 57(b) of the Telecommunications Law, imposed on LOs determined to have a Dominant Position in a particular Telecommunications Market.
- **“IMTL”** means an Individual Mobile Telecommunications Licence granted by the TRA under Articles 25, 29 and 39(b)(1) of the Telecommunications Law, by virtue of which the Licensee is authorised to install, operate and manage a mobile telecommunications network and to provide mobile telecommunications services.
- **“Licensed Operator or LO”** means a Person who is licensed to operate a Telecommunications Network or to provide a Telecommunications service under Article 25 of the Telecommunications Law, excluding BNET.
- **“MNOs”** means holders of an Individual Mobile Telecommunications Licence granted by the Telecommunications Law of the Kingdom of Bahrain
- **“Monthly Recurring Charge or MRC”** means the monthly Service Charge chargeable by the Access Provider and payable by the Access Seeker.

- **“Ofcom”** means the Office of Communications commonly known as Ofcom, is the government-approved regulatory and competition authority for the broadcasting, telecommunications and postal industries of the United Kingdom.
- **“Optical Network Terminal or ONT”** means optical network terminal, network equipment in the End User Premises used in the provision of a WBS Connection. The ONT is supplied, supported and maintained by the Access Provider.
- **“Point of Presence”** means a permanent physical location where an aggregation link or connection of a relevant Service is terminated at premises owned or leased by the Access Seeker or at the Access Provider’s colocation facility, but for the avoidance of doubt cannot be at an End User Premises, earth station, manhole, power room, lead-in pipe, duct, outdoor cabinet, MDF, riser room or anywhere not on the main island of Bahrain unless connected by a permanent physical connection above sea level and accessible to the Access Provider.
- **“Reference Offer or RO”** means the reference offer published by the Access Provider incorporating the Services (including any price and non-price terms) to be offered by the Access Provider to Licensed Operators, as may be amended from time to time, as approved by the Authority.
- **“Reference Offer Order”** means an order issued by the Authority requiring that the Licensee submit a revised Reference Offer
- **“Remote Radio Head or RRH”** means a remote radio transceiver that connects the BBU via an optical interface.
- **“RO Week”** means the industry workshop held by BNET between 28 November – 1 December 2021, allowing BNET to take on board Licensed Operators’ feedback on the First Draft of the proposed RO.
- **“SME”** means small and medium enterprises.
- **“Strategic Partner”** means an entity designated by the Government of the Kingdom of Bahrain and confirmed by the Authority as being a strategic partner of the Kingdom of Bahrain.
- **“Subscriber”** means any Person that is party to a contract with a Public Telecommunications Operator for the provision of Telecommunications Service.
- **“Telecommunications Law”** means the Legislative Decree No.48 of 2002 promulgating the Telecommunications Law of the Kingdom of Bahrain.

- **“Telecommunications Network”** means a network permitting the conveyance of messages, sound, visual images or signals between defined termination points by wire, radio, optical or other electro-magnetic means.

ANNEX D1 BNET'S FINAL SUBMISSION (Markup version)

(Attached separately)

ANNEX D2 BNET'S FINAL SUBMISSION (Clean version)

(Attached separately)