



**An Order issued by the Telecommunications Regulatory
Authority on the Reference Offer of the Bahrain
Telecommunications Company B.S.C**

31 March 2022

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Public version

Confidential information has been replaced by [X]

Purpose: To set fair, reasonable and non-discriminatory price and non-price terms for the International Cable Landing Station Access (ICLSA) service in Batelco BSC's Reference Offer.

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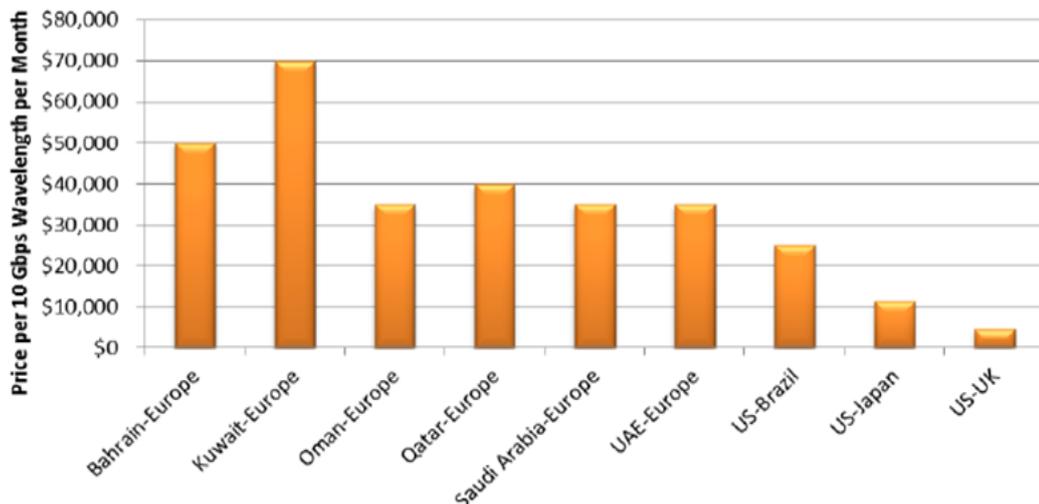
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Executive Summary

1. International connectivity is key to ensuring Bahrain meets its strategic telecommunications objectives. We need more investment in new international fibre. In considering our review the Authority approach has been to ensure:
 - a. We support the continued investment in international connectivity.
 - b. That pricing in the Kingdom is competitive when compared to prices charged in other Gulf countries and internationally.
 - c. Bahrain sustains its position as a regional Hub and is able to continue to attract international digital companies that wish to offer services to customers right across the region.
2. Bahrain is connected to the rest of the world through four submarine fibre optic cables, FOG, Falcon, GBI and TGN Gulf as well as terrestrial fibre optic cables, that route along the GCC Interconnection Authority (GCCIA) power transmission network and via King Fahd Causeway (KFC). These cables connect in Bahrain at “landing stations”. Batelco controls the landing stations of FOG, Falcon and GBI.
3. The rapid increase in demand for international connectivity is driven by high growth in data traffic. International connectivity is an essential input into a range of important telecommunications services: Internet access for consumers and enterprises as well as cross-border capacity used by enterprises, governments, content providers (e.g., Netflix and YouTube) and cloud platform providers such as Amazon Web Services (AWS).
4. Recognising the importance of international connectivity, as well as concerns raised by licensees, the Authority has conducted a market review. Our review has highlighted, among other things, the high prices that licensed telecommunications operators pay for international connectivity services in Bahrain compared to other countries. This is illustrated in Chart 1.

Chart 1 Pricing of 10 Gbps Wavelength (Monthly Lease)



Source: Terabit Consulting, *Strategic Analysis of the International Cable Systems in the GCC Region*

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Executive Summary

5. Given Batelco's control of the landing stations for so much of Bahrain's international capacity as well as the national connections to the international fibre cables, the Authority determined (on 23rd July 2020) Batelco had a dominant position in the wholesale market for international connectivity services. This means that Batelco is able to charge 'excessive' prices or offer 'unattractive' quality and/or terms and conditions to its customers (Telecom operators). Following the Authority's determination, Batelco is required to provide access to these existing assets / facilities, and to do so on terms and conditions approved by the Authority.
6. In October 2020, Batelco submitted, to the Authority, its proposed terms for the regulated access service to its existing landing stations. The Authority undertook a consultation on a draft Order, setting out the changes it was minded to require Batelco to make to the proposed terms. These changes would ensure that access to Batelco's landing stations was fit for purpose and offered in a manner consistent with Batelco's legal and regulatory obligations as a dominant licensee. Following that consultation process, this final Order now sets out the Authority's final directions to Batelco.

The objectives of the Authority's Final Order on the Reference Offer of Batelco

Promoting sustainable and efficient levels of investment

7. In setting prices, the Authority wished to encourage investment in new international fibre cables and capacity by both Batelco and other market players. Therefore, the Authority has ensured that the framework used for setting prices meets this objective.
8. Specifically, and given the capital intensive and long-lived nature of international connectivity assets, any party wishing to invest requires both the ability to earn a reasonable return on that investment and certainty regarding how regulation will develop.
9. In order to support such investment, the Authority has chosen to set the prices for the access to landing stations service using estimates of the replacement cost of assets. That is, the Authority has taken into account the costs that Batelco or another party would incur today, if it was to invest in similar capabilities.
10. It is also uncertain how traffic will develop over the next few years. To recognise this the Authority has been prudent and allowed a "mark up" on the costs to reflect the uncertainty. The Authority is confident that, together, these measures allow Batelco to earn a reasonable return on the investments it has made to provide international connectivity.
11. By using a replacement cost approach, the Authority is satisfied that it is providing other operators appropriate signals to either purchase access from Batelco or build their own international connectivity networks ('build or buy'). That is, the pricing provides a reference that other operators can compare with alternative ways of providing the service, namely building their own capability. If an operator is able to obtain international connectivity more efficiently than via Batelco, it will be incentivised to invest in self-provisioning this service; alternatively, it can (continue) to buy capacity from Batelco. Providing such build or buy signals is a common and well-established aspect of determining prices for regulated wholesale products.
12. Promoting sustainable and efficient investment also requires a stable regulatory framework, with clarity over how regulation is likely to develop. To provide such clarity, the Authority

has determined that the price terms set out in this Order will remain in place for a period of at least three years. The Authority is also of the view that the framework we are using, absent significant changes in the market, is appropriate for the medium to long-term.

Ensuring the service is provided at price and quality levels consistent with those that would be expected in a competitive market

13. The draft service description and price schedule proposed by Batelco for access to landing stations service did not, in the Authority's view, meet the requirements of a fair, reasonable and cost based offer. If implemented on these terms, it would have led to prices for international services in the Kingdom remaining high compared to other countries, as well as putting at risk Bahrain's position as a leading international hub for digital services.
14. Applying our principles has led the Authority to, reduce by 79% compared to those proposed by Batelco, the final prices that Batelco can charge for this service. Batelco's proposal would have enabled them to earn "excessive" returns and in our view, included costs that are not relevant to the provision of the service.
15. The Authority is confident that these price terms will allow Batelco to earn a reasonable return and still undertake further investment in international connectivity services. They will also ensure Bahrain remains as a hub while creating the conditions for other licensees and businesses to see significant reductions in the costs they face when buying international connectivity or other services that rely upon. Taking into account the reductions from the charges proposed by Batelco, the Authority believes it is reasonable to assume that retail connectivity prices for links to Europe, for example, could come down to the levels seen in the best performing GCC markets (as illustrated in Figure 1, above), representing a reduction of at least 30% from today's prices.

Ensuring diverse routing and resilience

16. In today's highly digitized world, end users cannot afford low quality services, or to lose connectivity even for short periods of time. Network resilience and the availability of alternative routes, e.g., in case of outage on a particular route ("redundancy") are becoming even more crucial than ever. Given the importance of these features to end-users of international connectivity, the Authority believes that these price terms will remove any potential barrier to accessing the services and will enable providers of telecommunications and ICT services to serve their customers with diverse and resilient services.

REFERENCE OFFER ORDER ON BAHRAIN TELECOMMUNICATIONS COMPANY B.S.C. (the “Batelco Order”)

1. Pursuant to:
 - a. The exercise of its powers under Articles 3(c)(1), 57(b) and 57(e) of Legislative Decree No. 48 for the year 2002 promulgating the Telecommunications Law (the ‘Law’), and Articles 3, 5, 6, 7, 9 *et seq.* of the Access Regulation issued on 19 October 2021 (the ‘Access Regulation’).
 - b. The Final Determination of Significant Market Power and Dominance in International Connectivity Markets, issued on 23rd July 2020 (“the Determination”);
 - c. The legal basis and reasoning set out in Annex A to this Batelco Order and which forms an integral part of this Batelco Order.

Price terms of regulated wholesale products and services

2. The Telecommunications Regulatory Authority (the “Authority”) hereby orders the price terms for the International Cable Landing Station Access Service (“ICLSA Service”) as detailed in the following table (following para. 3 below) to be implemented by Bahrain Telecommunications Company B.S.C (“Batelco”) in its Reference Offer (“RO”).
3. For the avoidance of doubt, the ordered price terms are only applicable to the existing submarine cables owned or controlled, in Bahrain’s territory, by Batelco (FOG, FALCON and GBI).

Figure 1: Table listing the Authority’s ordered price terms

| Service | Charge |
|--|--|
| One off installation charge (irrespective of capacity) | BHD 226 per installation |
| Passive cross connect (irrespective of capacity) | BHD 14 per cross connect per month |
| <i>Active cross connect</i> | <i>BHD per cross connect per month</i> |
| STM1 | BHD 29 |
| STM4 | BHD 115 |
| STM16 | BHD 460 |
| 1Gbps | BHD 186 |
| STM64 / 10Gbps | BHD 1,841 |
| 100Gbps | BHD 18,407 |
| Hosting service | BHD 496 per rack per month |

Non price terms of regulated wholesale products and services

4. The Authority hereby orders Batelco to amend its RO by including in it the Service Description for the ICLSA Service as set out in Annex B of this Batelco Order and the ancillary procedural documents expressly identified in the Service Description. The ICLSA Service will supersede and will replace the wholesale service that is Service Description 2-9: International Falcon Connection Service in the current RO. For the avoidance of doubt, the non-price terms set out in this Order are only applicable to the existing submarine cables owned or controlled, in Bahrain's territory, by Batelco (FOG, FALCON and GBI).
5. The Authority's Order requires Batelco to also include in its revised Service Description the following templates which should be submitted by access seekers as part of the procedure for ordering and provisioning of Access services:
 - a. a service request form for the ICLSH; and
 - b. a Service Handover Letter template clearly showing requirements.

Entry into force

6. This Batelco Order is effective on the date of its issuance.
7. Within 14 calendar days following the date of issuance of this Batelco Order, Batelco shall submit the draft Reference Access Offer, amended in accordance with Paragraphs 2, 4 and 5 of this Batelco Order, to the Authority for its approval. In the event that the Authority is satisfied that the revised draft Reference Access Offer fully reflects the terms of this Batelco Order, it will issue an approval letter and Batelco will be obliged to publish the amended Reference Offer on its website within two weeks from the date of the Authority's approval letter. Subsequently Batelco will be required to notify via email all its wholesale customers copying the Authority of the new ordered price terms and the new ordered non-price-terms. The Reference Access Offer shall be effective from the date specified in the approval letter or Order (as applicable), or, if no date is specified, from the date of the approval letter or Order.
8. This Batelco Order is without prejudice to any further orders, regulations and determinations that the Authority may consider necessary pursuant to its powers and duties under the Law.

Compliance

9. Batelco shall comply with the terms of this Batelco Order. Failure to comply with the terms of this Order may constitute a material breach of the Law and may, without prejudice to its powers to issue a further order pursuant to Article 11(b)(2) of the Access Regulation, consequently be subject to enforcement action pursuant to the relevant provisions of the Law.

Signed on 31 March 2022



Philip Marnick
General Director
Telecommunications Regulatory Authority
Manama, Kingdom of Bahrain

Annex A – Order Legal Basis and Reasoning

1 Introduction

17. Batelco's Reference Offer ('RO') is a key regulatory instrument that underpins competition in the telecommunications markets in the Kingdom of Bahrain. It affects Batelco and other operators.
18. This Annex provides the context and chronology of this review of Batelco's submission regarding the International Connectivity Services that are to be added to its RO. It contains the legal basis of the decisions the Authority has made in this Batelco Order. It then describes the main points the Authority has considered when reviewing the non-price terms and conditions for the ICLSA service. Thereafter, it sets out the Authority's review of the price terms proposed by Batelco, alongside the Authority's reasoning for why the ordered price terms reflect a fair, reasonable and non-discriminatory set of terms.
19. In determining the terms of this Offer, the Authority has had significant regard to ensuring that the terms of the ICLSA service will continue to enable parties (both the current access provider and access seekers) to undertake appropriate investment in bringing additional international connectivity to the Kingdom in line with the government's strategic objective as required by the Fifth National Telecommunications Plan. In the Authority's view, this requires it both to consider the level at which price terms are set and also to provide clarity to the market over how long those price terms will be in place and how, in due course, they may be revised.
20. The Authority sets out, in Section 3 of this Annex, its approach to determining appropriate (i.e., fair, reasonable and non-discriminatory) price terms. As set out therein, it has applied a replacement cost approach to determining the relevant charges, thus ensuring that the amounts paid for the ICLSA service will provide correct build or buy signals to the access seekers, while also providing the access provider with the ability to earn a reasonable return on any future investment it makes in international connectivity.
21. It is also important, however, that parties have clarity over the duration for which these price terms will be in place and how they will subsequently be reviewed. This is because the Authority recognises that investments in international connectivity have a long payback period. This means, in turn, that parties are more likely to invest if they have clarity over how the market will develop in the longer term. Put simply, a party may not choose to invest today if it believes there is a risk that regulated prices will be reduced substantially at the time of the next price control review. Regulatory stability is, therefore, key.
22. In determining the price terms set out in this Order, the Authority has, therefore, assumed that these will remain in place for a period of at least three years from the date on which this Order comes into force. The Authority will monitor the market developments and may review the market conditions if so required (e.g., investments or lack of investments in new submarine cable, decommissioning of existing submarine cables). Should the Authority continue to believe that ex ante regulation of Batelco's ICLSA product (i.e., as defined in this Order and restricted to those submarine cables currently owned or controlled, in Bahrain's territory, by Batelco, namely FOG, FALCON and GBI) is required, it will, at this point, review the appropriate price terms for the next regulatory period. The Authority does not consider it is appropriate to

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Annex A – Order Legal Basis and Reasoning

determine, now, how it might set price terms in such a scenario. In the event that Batelco were to invest in landing a new submarine cable to Bahrain, then the price and non-price terms covered by the terms of this Order will not automatically apply to the new submarine cable. The Authority would, however, take a view at that moment in time of the then current conditions. In any future regulatory price determinations, the Authority anticipates that it will remain consistent with its approach to promoting investment and the importance of providing appropriate build or buy signals to all parties, and if price control remedies were deemed necessary, would likely continue to use a replacement cost approach, in line with that set out in Section 3 of this Annex.

1.1 Legal basis

23. This Order is issued by the Telecommunications Regulatory Authority (the “Authority”) pursuant to Articles 3(c)(1), 57(b) and 57(e) of Legislative Decree No. 48 of 2002 promulgating the Telecommunications Law (the “Law”), the Final Determination of Significant Market Power and Dominance in International Connectivity Markets, issued by the Authority on 23rd July 2020 (the “Determination”) and Articles 3, 5, 6, 7, 9 *et seq.* of the Access Regulation issued on 19 October 2021. That is:
- a. Article 3(c)(1) of the Law provides that the Authority has the power to issue Orders as may be necessary for the implementation of the provisions of the Law, including in relation to interconnection and network access;
 - b. In the Determination, the Bahrain Telecommunications Company BSC(c) (“**Batelco**”) was found to hold a dominant position in the wholesale market for international connectivity services (“**ICS**”);
 - c. Articles 57(b) and 57(e) of the Law provide the Authority with the power to issue an Order to a licensee determined to be dominant in a particular telecommunications market, specifying fair, reasonable, and non-discriminatory terms, conditions and tariffs and which it shall include in its RO for network access and interconnection services;
 - d. Article 3 of the Access Regulation gives the Authority the power to impose, by way of an Access Order, on a licensee declared as holding a dominant position in a relevant market, one or more of the Access related obligations;
 - e. Article 5 of the Access Regulation sets out requirements which Access Providers may be required to comply with;
 - f. Article 6 of the Access Regulation lists the types of Access services that Access Providers may be required to provide; and
 - g. Article 7 of the Access Regulation sets out the requirement on Access Providers to publish a Reference Access Offer.
 - h. Articles 9 *et seq.* set out the process that is to be adopted leading to the publication of a Reference Access Offer.
24. Pursuant to having previously been found to be dominant in a number of other relevant markets, Batelco has already published a RO. Its most recent RO was published in August 2019 with the changes set out in that Reference Offer reflecting those ordered by the Authority

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as per its Order issued on 30 May 2019 regarding the Reference Offer of Batelco (Ref: MCD/05/19/047).

25. Pursuant to the Determination, Batelco was required, within two months of the date of the Determination, to submit, to the Authority for its approval, a draft service description for its ICS, including price and non-price terms for this service. In accordance with the provisions of Article 57 of the Law, the Authority expected, in order to be able to approve the terms on which this service is offered, that Batelco's proposals in relation to terms, conditions and prices for this service would be fully documented and justified. As further set out in the Determination, the Authority requires the ICS to cover three elements:
 - a. Co-location at the landing station, e.g. for equipment terminating national connectivity services at the landing station or dedicated international connectivity equipment.
 - b. Cross connect at the landing station, i.e., passive connectivity between the national part (where Licensees' co-located equipment is located) and the international part (location of the Submarine Line Terminal Equipment, "**SLTE**") of the cable landing station, inclusive of any connector links (or patches) required.
 - c. And, subject to whether the domestic part of a submarine cable is owned or controlled by Batelco, connectivity between the passive cross connect and the international submarine cable on the territorial boundary of Bahrain including the SLTE, (including any required connector links or patches), the terrestrial network between SLTE and beach manhole (where applicable) and the domestic submarine cable.
26. In response to this, Batelco submitted, to the Authority on 22 October 2020, its proposed reference offer terms for the ICS. This followed the Authority granting Batelco an extension to meet the requirements of the Determination. However, rather than submitting, to the Authority for its approval, a draft service description for its ICS, including price and non-price terms for this service, Batelco actually submitted a standalone RO ("**Proposed Standalone RO**") for ICS.

1.2 RO review process

27. Following receipt of the Batelco's Proposed Standalone RO terms and conditions, including service description, for its ICS, the Authority has engaged in a detailed process to review the same. This has included issuing a number of requests for information ("RFIs") to Batelco.
28. The Authority issued its first RFI to Batelco on 19 November 2020 (Ref. MCD/11/20/065). This RFI noted that Batelco, in its 22 October 2020 submission, had not provided to the Authority the supporting data and analysis that was used to derive the proposed charges in Schedule 3 of Batelco's submission. The Authority therefore required Batelco to provide this information, which the Authority noted may include but not be limited to technical diagrams and descriptions, costing information, usage assumptions / forecasts, estimations and contractual information for each submarine cable owned or operated by Batelco. In addition, Batelco was asked to provide copies of its full submission in Microsoft Word, rather than as Adobe (pdf) documents. Batelco was required to provide the required information by 3 December 2020.
29. Batelco responded to the Authority on 10 December 2020, following the Authority granting it an extension of one week.
30. Following receipt of this information from Batelco, the Authority carried out an initial review of Batelco's proposal. This led to the Authority sending to Batelco, on 30 December 2020, a second RFI (Ref. MCD/12/20/073). This required Batelco to respond to a number of specific questions the Authority had regarding the derivation of the price terms proposed by Batelco for its ICS. Batelco was required to respond to this by 13 January 2021.
31. Batelco responded to this second RFI on 21 January 2021, again following an extension granted by the Authority. In its response Batelco provided a number of files in support of its proposed charges.
32. Also following its initial review of Batelco's Proposed Standalone RO for ICS, the Authority sent a letter to Batelco on 14 January 2021 (Ref. LT-MCD-2021-200), setting out a list of initial concerns that the Authority had identified with the non-price elements of Batelco's proposal. As well as detailed comments on the draft service description, in this letter the Authority set out its view that the ICS should be incorporated into Batelco's existing RO, rather than it being a new, standalone RO. To this end, the Authority granted Batelco until 28 January 2021, to address the matters set out therein.
33. Batelco responded to the Authority's letter on 28 January 2021. In its response, Batelco replied to each of the points set out by the Authority in its letter of 14 January 2021. However, it did not submit a revised RO, incorporating the proposed ICS into its existing RO. Batelco stated it would be happy to do so, but requested additional time, as it stated that this would require it to merge ten schedules of its draft ICS RO with its existing RO.
34. The Authority then replied to Batelco's letter on 16 February 2021 (Ref. LT-MCD-2021-250). In this, the Authority responded to the points made by Batelco in its letter of 28 January 2021 and set out that, in order to approve an Interconnection offer under Article 57(b) for the ICS, the Authority required Batelco to adhere to the terms of the Existing RO and to add the ICS in Schedule 1 of that RO. Consequently, Batelco was advised to revise the ICS service description, in line with the preceding points set out in the Authority's letter, as a new Schedule 1 of the Existing RO and submit it as the offer for the Authority's approval. In so doing, the Authority also required Batelco to set out, if necessary, in a schedule of amendments or special

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Annex A – Order Legal Basis and Reasoning

conditions in the service description for the ICS, a list of those other provisions in its Existing RO which shall not apply to the ICS, or which are amended for the ICS.

35. Batelco responded to this letter on 02 March 2021, with its revised RO. In its letter to the Authority enclosing this revised RO, Batelco stated that it had:
 - a. replaced the existing International Falcon Connection (“IFC”) service description with the ICS service description; and
 - b. created an Annex 3 of special conditions to the ICS service description, listing out all provisions in the existing RO which shall not apply to the ICS, or which are amended for the ICS.
36. It is this revised RO, most particularly the ICS service description, the Annex 3 of special conditions to the service description, proposed amendments to Schedule 8 of the RO, and the proposed charging schedule for the ICS that are the subject of this draft Order.
37. There then followed further correspondence between the Authority and Batelco specifically on the subject of the proposed price terms for the ICS. On 07 April 2021 (Ref. LT-MCD-2021-35430), the Authority wrote to Batelco inviting it to comment on a number of the Authority’s initial observations on Batelco’s proposed terms. Batelco responded to this letter on 21 April 2021 (Ref. GCL/61/21). Following receipt of Batelco’s reply, and to expedite its review process in an efficient manner, the Authority arranged an online meeting with Batelco, with this meeting then taking place on 28 April 2021.
38. Following the above mentioned meeting, the Authority sent to Batelco, on 04 May 2021, a final follow up request for information and clarification (Ref. LT-MCD-2021-396). This asked Batelco to:
 - a. review the list of assets it had previously provided to the Authority as being relevant for determining the proposed price terms, and explain which assets, or parts thereof, were related to the domestic part of the submarine cables or equipment.
 - b. set out the lengths of cables it had invested in, both within and beyond Bahraini territory, for the FOG and Falcon cables.
 - c. Explain why it was necessary for Batelco to have active network equipment between the ODF or third party active equipment at the landing station and the SLTE, including providing a description of the contractual relationships between Batelco and, respectively, FOG, FALCON and GBI concerning the responsibilities of Batelco and these parties for operating and maintaining the SLTE.
 - d. Resubmit its forecast for demand on the FOG and FALCON cables, including the capacity taken by a large customer.
39. Batelco responded to this request, by letter, on 23 May 2021 (Ref. GCL/79/21). In its response, Batelco submitted to the Authority a revised price schedule for the ICS.
40. It is the amendments to the RO, most particularly the ICS service description, the Annex 3 of special conditions to the service description, proposed amendments to Schedule 8 of the RO, and the proposed charging schedule for the ICS that are the subject of this Order.

1.3 The consultation process of the draft Reference Offer Order

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Annex A – Order Legal Basis and Reasoning

41. Following the Authority's review of the Reference Offer, on 28 June 2021, the Authority issued for consultation its draft Reference Offer Order.
42. Following the Authority granting a request from Batelco to extend the deadline for responding to the consultation, , five Licensees (Batelco, Infonias, Nuetel, STC and Zain), on 12 August 2021, submitted responses to the consultation.

1.4 The remainder of this Annex

43. The remainder of this Annex sets out the following:
 - a. for each consultation question or set of consultation questions relating to the same topic, the original text from the Authority's draft Reference Offer Order;
 - b. a summary of the responses submitted by Licensees;
 - c. the Authority's evaluation of those responses; and
 - d. the Authority's reasoning for the its final decision as reflected in the final Reference Offer Order.²

² Any references in the text from the Authority's draft Reference Offer Order to, for example, a "draft Order", or "proposing" to order Batelco in certain matters should be read in this context.

2 The proposed non-price terms

44. In this part of Annex A to the Batelco Order, the Authority describes the key issues it has considered when reviewing the draft Service Description provided by Batelco and in determining not to approve that offer and to issue an order under Article 57(b) of the Law.
45. This part of Annex A to the Batelco Order should be read in conjunction with Annex B, which sets out the Authority's exact required amendments to Batelco's Service Description.³ It is intended to only be a summary of the key issues considered by the Authority and is not an exhaustive description of the Authority's views or analysis.

2.1 Whether an Access Seeker must take a hosting service from Batelco as a pre-requisite to receiving the international cable landing station connection service

46. As stated previously, and as further set out in the Determination, the Authority requires the ICS to cover the following three elements:
- a. Co-location at the cable landing station.
 - b. Cross connect at the cable landing station.
 - c. Connectivity between the cross connect and the international submarine cable on the territorial boundary of Bahrain (subject to whether the domestic part of a submarine cable is owned or controlled by Batelco).
47. As drafted by Batelco, its proposed International Cable Landing Station Access (ICLSA) Service has two components:
- a. The International Cable Landing Station Connection (ICLSC) service is the primary service, covering the link over the domestic segment of the international submarine cable; and
 - b. The Direct International Cable Landing Station Hosting (Direct ICLSH) service. This service provides co-location space at the CLS and at which the Access Seeker has equipment installed and to which it has access.
48. The ICSLC, being the connectivity service, includes both the "passive" cross connect at the landing station and the connectivity between that cross connect and the international submarine cable on the boundary of Bahrain's territorial waters and international waters including the SLTE, (including any required connector links or patches), the terrestrial network between SLTE and beach manhole (where applicable) and the domestic submarine cable.
49. However, the draft Service Description provided by Batelco has been constructed in such a way that means an Access Seeker must take the Direct ICLSH co-location service from Batelco in order to be able to receive the ICLSC service.

³ Annex B is shown in track changes, so that Batelco is able to see easily the Authority's proposed changes to its draft Service Description.

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50. The Authority understands that Batelco’s rationale for its proposed formulation is that the Determination does not state that an Access Seeker can choose how the ICS is provided – specifically, an Access Seeker may rely on BNet equipment, or use its own equipment. However, in either case it would be necessary to install and maintain equipment within the designated area of the CLS. Accordingly, Batelco considers that a Direct ICLSH service is required regardless of which service option an Access Seeker chooses.
51. The Authority does not consider that this is appropriate. As Batelco has acknowledged, an Access Seeker can access the ICLSC by either co-locating its own equipment in the Batelco CLS (i.e., using the Direct ICLSH service) or by accessing it at BNet’s PoP in the CLS. In the latter scenario, it would be BNet, not the Access Seeker, who would purchase a co-location service from Batelco.
52. Therefore, while the Authority acknowledges that it is a pre-requisite for the Access Seeker to obtain access to a service that reaches the co-location space designated at the CLS, this does not mean that an Access Seeker must be mandated to take a co-location service from Batelco, rather than BNet taking that service from Batelco. Given this, the Authority is ordering Batelco to amend the Service Description, so that an Access Seeker is not required to purchase the Direct ICLSH service from Batelco, in order to purchase the ICLSC service.
53. Indeed, the Authority notes that this is consistent with the further guidance it set out in the Determination on the implementation of the ICLSA, wherein the Authority stated, *“However, for the avoidance of doubt, space rental charges for BNet equipment co-located at the landing station should be imposed on BNet at non-discriminatory terms, rather than on the party seeking access to Batelco’s international connectivity services.”*⁴

Q1. Do you agree that an Access Seeker should not be mandated to take the ICLSH co-location service from Batelco? Are there other options for how an access seeker should be able to connect to the ICLSC service?

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders’ comments in relation to question 1. | |
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| Summary of stakeholders’ submissions | The Authority’s analysis and response |
| <p>Batelco does not object to the Authority’s proposal that an Access Seeker should not be mandated to take the ICLSH co-location service.</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> | <p>The Authority notes Batelco’s response and that it does not object to the Authority’s proposal.</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> |

⁴ The Annex to the Determination, page 119.

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| <p>[REDACTED]</p> | <p>[REDACTED]</p> |
| <p>STC agrees that an Access Seeker should not be mandated to take the ICLSH co-location service.</p> <p>STC argues that an Access Seeker should be able to access the ICLSC either by co-locating its own equipment in the Batelco CLS (i.e. by using the Direct ICLSH Service) or by sharing space in the BNet PoP at the CLS (in which case BNet instead of the Access Seeker should purchase a co-location service from Batelco to accommodate the Access Seekers' domestic connectivity requirement).</p> <p>STC also suggests alternative options such as virtual co-location and connecting to the CLS via remote data centres. It refers to an ITU which state that where there is a single CLS controlled by the same operator that cannot offer physical co-location due to space limitation or any other legitimate reasons, the CLS Operator must take reasonable measures to propose an alternative solution. Such alternative solutions may include options such as virtual co-location, provisioning additional equipment space, optimising the use of existing space or finding adjacent space.⁵ For example, STC argues that migration of the cable landing station to a carrier neutral facility would effectively remove any bottleneck in the carriage of international traffic.</p> <p>Firstly, it states that the annex to the determination states that space rental charges for BNet equipment co-located at the landing station should be imposed on BNet at non-discriminatory terms, rather than being determined by the party seeking access to Batelco's international connectivity services. According to STC, this implies that there is no link between the party seeking co-location and Batelco, as BNet is deemed to be the</p> | <p>The Authority notes STC's support for its view point.</p> <p>The ICLSH service provides co-location space for both an Access Seeker to locate its equipment (Direct ICLSH) at the CLS, or for BNet to operate its PoP at the CLS which in turn can provide active services to Access Seekers. The Authority considers that this provides sufficient option for an Access Seeker to obtain access to the CLS.</p> <p>With regards to STC's suggestion to migrate the CLS to a neutral facility, the Authority reminds STC that the remedies set forth in the Determination are developed to resolve the bottleneck given the current market structure.</p> <p>The Authority agrees that where BNet is acquiring the service for terminating a national connectivity service at the CLS, it is BNet that is charged for the colocation needed at the CLS. However, it remains an option for the access seeker to also locate equipment at the landing station using the ICLSH service.</p> |

⁵ https://www.itu.int/en/ITU-D/Projects/ITU-EC-ACP/HIPSSA/Documents/FINAL%20DOCUMENTS/FINAL%20DOCS%20ENGLISH/submarine_cables_watra_guidelines.pdf

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| <p>intermediary that acts as primary interface to Batelco for the co-location service.</p> <p>Finally, STC notes there are additional network elements in the proposed ICLSC Service which, in its view, do not reflect the illustrative guidelines issued as part of the Authority's Determination. These are shown as the Batelco IC PoP ODF and Batelco IC PoP which lie in between the National Access ODF and International Access ODF in the figure in Annex 1 of the draft Determination. STC seeks further clarification on why this equipment is required and why this cost is being passed on.</p> | <p>The Authority agrees with STC. The Authority has considered the requirements for those assets and has concluded that this additional active equipment is not required in light of equipment already placed before and after the National Access and International Access ODFs respectively (specifically, colocated BNet or OLO equipment at the landing station and the SLTE and other associated equipment). The Authority discusses this further in the context of comments made in relations to Questions 9 and 12.</p> |
| <p>Zain sets out that it disagrees with the Authority's draft position. Rather, it submits that Access Seekers must be present in the hosting location at the landing station because the Access Seeker is the customer of the ICLSH service.</p> <p>Zain also states that the proposed ICLSH co-location service needs to address local connectivity. It states that the ICLSA service should be tied with a scalable and commercially viable connectivity solution offered by BNet (e.g. Dark Fibre or Duct Access).</p> | <p>The TRA notes Zain's disagreements but is unsure how Zain's requirement differs from an Access Seeker being able to locate its equipment at the CLS co-locating with Batelco. Given this, the Authority does not consider it necessary to amend its proposed approach.</p> <p>Matters relating to Dark Fibre and Duct Access services are related to domestic connectivity and fall beyond the scope of this Order.</p> |
| <p>Nuetel agrees with the Authority's draft position stating that an Access Seeker should not be mandated to take the ICLSH co-location service from Batelco. It then also states that, in its opinion, another option would be to allow the Access Seeker to work directly with the cable system owner to build a separate SLTE and hence use the ICLSH service.</p> | <p>The Authority notes Nuetel's agreement. With regard to Nuetel's second point, the Authority considers this to be a commercial matter that Nuetel can address with international cable operators. As such, this falls beyond the scope of this consultation.</p> |
| <p>Infonias agrees with the Authority's draft position. However, it states that its agreement is conditional on BNet having one co-location to serve all OLO's from that rack. It believes that this may be done either through BNet equipment or direct fibre patching in case of L1 connectivity.</p> | <p>The Authority notes Infonias's comment. The Authority's position seeks to reduce the risk of potential bottlenecks occurring by having an alternative to the Direct ICLSH co-location option.</p> |

The Authority's final decision

The Authority considers that the inclusion, in the Service Description, of two co-location options, Direct ICLSH and co-location at BNet's PoP, provides the Access Seeker with sufficient flexibility on how to obtain access to the CLS. It also confirms that matters relating to how the Access Seeker reaches the CLS are outside the scope of this consultation. STC's comment relating to the

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specification of the ICLSA service is dealt with further in the Authority’s final decisions concerning questions 9 and 12.

Content of the Consultation document in relation to Question 2

- 54. Batelco's draft Service Description provides that the Access Seeker's personnel must adhere to Batelco's instructions and procedures relating to the Direct ICLSH Service, including the security and site regulations in the Facilities Access Technical Manual.
- 55. However, the Authority considers that the adherence by the Access Seeker's personnel to Batelco's instructions and procedures relating to the Direct ICLSH Service should be limited to security and site regulations only. Further the regulations should be written and reasonable (such as the site and security regulations set out in the Facility Access Technical Manual for the Existing RO). The Authority is therefore requiring Batelco to amend the Service Description in this regard.

Q2. Do you agree that the requirements to meet Batelco’s instructions and procedures relating to the Direct ICLSH Service should be limited to security and site regulations that are written and reasonable?

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders' comments in relation to question 2. | |
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| Summary of stakeholders' submissions | The Authority's analysis and responses |
| Batelco states that it does not have any objection to paragraph 3.4 of the Revised Service Description ("RSD") (in Annex B of the Draft Order) which states as follows: " <i>The Access Seeker's personnel must adhere to all of Access Provider's reasonable written security and site regulations procedures relating to the Direct ICLSH which include Access Provider's site and security regulations as set out in the Facility Access Technical Manual.</i> ". Batelco believes that this text sets out the requirements in sufficient terms. | The Authority notes Batelco's response and that it does not object to paragraph 3.4 of the RSD included in the Draft Order. |
| STC agrees with the Authority's draft position. However, it sets out that, as far as it is aware, there is no Facility Access Technical Manual in existence. It suggests that, if this still does not exist, the documentation should include the summary of security requirements which is Annex D of the current IFC service description (or Annex | The Authority notes STC's support of its draft position. It notes that the Facility Access Technical Manual is not currently in place. Clearly, Access Seekers cannot be expected to adhere to procedures and policies that are not known. In order for this to have effect, |

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| <p>3 of Schedule 6.9 of BNet's Reference Offer relating to similar material as part of the Service Node Facilities Management Service).</p> | <p>therefore, Batelco must submit as an annex to the supply terms, its Facility Access Technical Manual.</p> |
| <p>Zain agrees with the Authority's draft position.</p> | <p>The Authority notes Zain's response.</p> |
| <p>Nuetel agrees with the Authority's draft position. It further argues that Batelco's procedures should be associated with clear KPIs/SLAs.</p> | <p>The Authority notes Nuetel's agreement and confirms that Batelco's procedures are covered by the KPIs and SLAs as defined in the Service Description.</p> |
| <p>Infonas states that it partially agrees with the Authority's draft position. However, this is subject to the condition that Batelco's security and site regulations must take into consideration the situations when access is needed for emergency cases, such as but not limited to, fixing a fault. Infonas believes that Batelco should have no authority over the Access Seeker's personnel except for security and site regulations. This is to avoid unnecessary delays in delivering the Direct ICLSH service, as any such delays can potentially cause delays to the end customer.</p> | <p>The Authority notes Infonas's response. The Authority does not consider that emergency cases mean that different security and site regulations should apply, where the regulations are written and reasonable. To this end, it does not consider it necessary to further amend the service description in this regard, from the version included in the Draft Order.</p> |

The Authority's final decision

Batelco's instructions and procedures relating to the Direct ICLSH Service should be limited to security and site regulations that are written and reasonable. Batelco's Facility Access Technical Manual is to be annexed by Batelco to the supply terms as the measures to ensure compliance with requirements for site security.

2.2 Ensuring the Service Description is complete

56. It is important that the ICLSA service is complete and does not require an Access Seeker to acquire additional, non-regulated services, such as a patch cable, to complete the delivery of the ICLSA service. This is because otherwise, there is a risk that Batelco could exploit its bottleneck by setting anti-competitive price and non-price terms for such unregulated services, thus negating the beneficial effects on competition of the proposed remedy. This point is recognised in the Annex to the Determination:

“the access service to be provided by Batelco must be seamless, and so must not require an access seeker to purchase any other services or subservices or ancillary services in order for that access seeker to establish, in conjunction with domestic data connectivity, a functioning international connectivity service from a cable owner holding the appropriate licenses required.”⁶

57. Therefore, except for it being a pre-requisite that the Access Seeker would have to obtain access to a service that reaches the co-location space designated at the CLS, the Authority proposed to order Batelco to amend the Service Description to include an express provision (see clause 6.1(g)) that the ICLSA shall not require the Access Seeker to obtain any additional non-regulated services in order to obtain it. This is to avoid a situation where Batelco could, without this provision, potentially exploit its bottleneck by requiring an Access Seeker to obtain, from it, other services not included in its RO.
58. According to the draft Service Description, the ICLSH related services Batelco is to provide include a supply of a/c electricity to the ICLSH of 1kW/h (which can be increased in increments of 1kW/h). The Service Description then states that Batelco will apply the same interruption and back-up protection to this power supply as applies to existing customers in the same facility. In contrast, however, the Authority notes that in Batelco’s IFC Service Description, the base supply of a/c electricity starts at 3kW/h. Due to Batelco’s offer of a lower base power supply for the Direct ICLSH, the Authority sought stakeholder views on whether 1kW/h is appropriate or whether it should start at 3kW/h.

Q3. Do you have any comments in relation to related services that are to be made available?

⁶ The Annex to the Determination, paragraph 239

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders' comments in relation to question 3. | |
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| Summary of stakeholders' submissions | The Authority's analysis and responses |
| <p>Batelco accepts the provision inserted by the Authority in the draft Service Description (clause 6.1(g)) stating that an ICLSA service should be all-inclusive such that an Access Seeker should not have to separately acquire any ancillary non-regulated services from the Access Provider.</p> <p>With regards to the power requirements, it submits that 1kW/h should be sufficient to operate the type of telecommunications equipment typically installed in a CLS, and that the existing CLSs were not designed as co-location facilities that would host multiple carriers and cater for high power requirements. Batelco also sets out that it included 1kW/h as the initial power supply due to recent increases in electricity prices.</p> <p>Batelco also argues that any expansion of power capacity would require significant investment which Batelco may not be able to recoup as its CLSs are all more than ten years old. Therefore, in its view, any Access Seeker who seeks an initial power supply greater than 1kW/h should have to pay a one-off installation charge and recurring monthly charges sufficient to cover the cost of the additional power supply. Requiring Access Seekers to bear the costs of any additional power, is, Batelco argues, the best way to ensure that such power levels are genuinely required as it should mean that Access Seekers will not seek more than they actually need.</p> | <p>The Authority notes that Batelco accepts the proposed clause 6.1(g) of the Service Description.</p> <p>With regards to the power requirements, the Authority believes that the Access Provider's service for the provision of power to the Access Seeker should be sufficiently flexible to satisfy the Access Seeker's technical requirements (whether that be 1kW/h or 3kW/h). Thus it would be appropriate for the Access Provider to provide power in increments of 1kW/h, starting at 3kWh and up to a maximum of 7kW/h (consistent with the IFC Service), so allowing Access Seekers to only purchase the amount of power they require. Given that there is no technical difference between the supply of 1kw/h and 3kw/h and the limited total number of potential access seekers, the Authority concludes that no change to the hosting charge is warranted. That is, the supply of connectivity to power of up to 3kw/his included in the ICLSH hosting charge. The Authority otherwise agrees that only genuine requirements for power should be fulfilled and that the price of additional power requirements up to 7kw/h and the consumption of power should be based on the actual costs incurred by Batelco.</p> |
| <p>STC agrees with the services set out in the draft Order. However, it argues that because of the critical nature of the infrastructure, the CLS operator should be required to minimize the risk of outages. Specifically, STC argues that Batelco should be required to assess and mitigate physical and electronic threats to the CLS and maintain a risk management programme that ensures that threats to the ICLSC service are negated and vulnerabilities in the service are protected. This is because STC submits that despite providing some degree of protection against mishaps for ICLSC service users, Service Level Agreements do not, in</p> | <p>The Authority notes STC agrees with the services set out in the draft Order and comments.</p> <p>It considers that Resolution No (5) of 2017 Promulgating the Regulation on Critical Telecommunications Infrastructure Risk Management provides the appropriate risk management mechanism for Batelco in respect of the CLS, rather than the draft Order. The contents of that Regulation are beyond the scope of this current exercise.</p> |

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| <p>the absence of liquidated damages, fully compensate for loss of service.</p> <p>Furthermore, STC submits that the specification of power requirements in the SD should be as flexible as possible, with Batelco offering 1kw/h increments over a 1kw/h base. It then states that, “[t]he charges should be no more than the option of starting the base supply at a higher level”.</p> <p>Lastly, STC points out that, in its view, in many markets, various options are offered for co-location or hosting services. These include co-mingling, caged shared space and separate equipment rooms, among others. Such variants should be included in the ICLSA service, if required.</p> | <p>With regards to the power requirements, the Authority considers that the Access Provider’s service for the provision of power to the Access Seeker should be sufficiently flexible in order to satisfy the Access Seeker’s technical requirements (whether that be 1kW/h or 3kW/h). It would be appropriate to have charges that reflect the solution required by the Access Seeker. The Authority considers that the Service Description allows for the flexibility of power supply to meet Access Seekers’ requirements. Therefore, in the Authority’s view, STC’s proposal is, in this regard, in line with the Draft Service Description.</p> <p>The Authority notes it has responded to STC’s comments regarding the hosting service in Question 1.</p> |
| <p>Zain agrees that, the ICLSA service should be <i>“complete and [does] not require an Access Seeker to acquire additional, non-regulated services, such as a patch cable, to complete the delivery of the ICLSA service”</i>. To ensure this principle is upheld, Zain argues that Batelco must not be able to impose any other charges on the Submarine Cable owner or any other party for activating any international capacity.</p> <p>With regard to electrical power requirements, Zain argues that the base supply of a/c electricity should start at 3kW/h, due to the fact that different equipment may have different electrical requirements.</p> <p>Lastly, Zain also requests the Authority to take into account its comments in relation to the availability</p> | <p>The Authority notes Zain’s comments.</p> <p>The Authority agrees that, under the terms of the Batelco Order, Batelco may not levy any charges other than those set out therein.</p> <p>In relation to the comment on power requirements, the Authority considers, as previously stated, that the Access Provider’s service for the provision of power to the Access Seeker should be sufficiently flexible in order to satisfy the Access Seeker’s technical requirements. It would be appropriate to have charges that reflect the cost of the solution required by the Access Seeker if different from the default. The Authority considers that the Service Description allows for the flexibility of power supply to meet Access Seekers’ requirements and that it would, therefore, not be correct to require Batelco to only supply a/c electricity from 3kW/h.</p> <p>As the Authority has set out in respect of Question 1, matters of backhaul and domestic connectivity are beyond the scope of this Order.</p> |

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| <p>of a complementary backhaul product to be offered by BNet.</p> | |
| <p>Nuetel argues that the default offering for the supply of a/c electricity should be 3kW/h, with this being provided at the same monthly charges as that in the “standard offering for Data Centre service”.</p> <p>In addition, Nuetel argues that the Authority should consider including as part of the service:</p> <ul style="list-style-type: none"> a) Dark Fibre b) Spectrum c) More Bandwidth / Speed options (not limited to SDH standard speeds). <p>Nuetel further points that it should be associated with clear KPIs/SLA.</p> | <p>As stated above, the Authority considers that the Access Provider’s service for the provision of power to the Access Seeker should be sufficiently flexible in order to satisfy the Access Seeker’s technical requirements (whether that be 1kW/h or 3kW/h). It would be appropriate to have charges that reflect the solution required by the Access Seeker. As such, the default offering for the supply of a/c electricity should start at 1kW/h.</p> <p>The Authority notes that Nuetel has submitted that the Authority should consider including additional service elements as part of the service. However, in the Authority’s view, this would go beyond that remedy required to resolve the bottleneck identified in the Determination. Furthermore, domestic connectivity services are beyond the scope of this review.</p> |
| <p>Infonias argues that the base power supply in the draft SD is low. It believes this should start at 3kW/h, and that Batelco should provide several options for the Access Seeker for the supply of a/c electricity, with costs of each option provided as required.</p> <p>Infonias also submits there must be no hidden fees/charges levied by Batelco, with all such fees disclosed in advance.</p> | <p>The Authority considers that the Access Provider’s service for the provision of power to the Access Seeker should be sufficiently flexible in order to satisfy the Access Seeker’s technical requirements. As such, the default offering for the supply of a/c electricity should start at 3kW/h. It would be appropriate to have charges that reflect the solution required by the Access Seeker if different from the default at the level of costs incurred by Batelco.</p> |

The Authority’s final decision

The main issue raised by respondents relates to the provision of power for Access Seeker’s equipment. The Authority considers that all arguments relating to this matter are fair but is keen to ensure that Access Seekers only pay for services that they actually require and that they also do not over specify requirements causing technical issues for the Access Provider. Therefore, the Authority concludes that the power supply service as defined in the Service Description should provide flexibility to meet these requirements, with the default offering for the supply of a/c electricity included in the ICLSH price starting at 3kW/h. Any upgrade to the power supply to a level above the default and consumption of electricity must be charged at cost. This is reflected in the Service Description included in Annex B, and which Batelco is ordered to adopt.

2.3 Service Levels included in the Service Description

59. In its draft Service Description, Batelco did not include any service level parameters. The Authority believes that this is not appropriate: without service level parameters, Batelco would not be held to offering the ICLSA service to a reasonable level of quality, or to ensuring the availability of the service, thus placing the Access Seekers at a potential disadvantage to Batelco’s own downstream business, when looking to compete in the retail market. The Authority also notes that service level parameters are included in all the other service descriptions that form part of Batelco’s RO.
60. The Authority has, therefore, requested Batelco to include, in the ICLSA Service Description, service levels commensurate with those in the service description for the IFC service included in Batelco’s current RO.
61. In its correspondence with the Authority, Batelco set out its view that the ICLSA Service does not require such strict parameters, as it is not a core network node. Batelco also stresses that time needed to travel to any cable landing station, where the service would be provided, must be considered when addressing any fault.
62. However, having considered Batelco’s viewpoint, the Authority considers that the service levels it is proposing to order Batelco to include in its Service Description are appropriate.
63. In summary the service levels the Authority requires Batelco to adopt are:
- a. Delivery lead times in accordance with the timetable set out in Clause 6.1 of the Body Terms (as amended by Annex 3 (Special Conditions)) of the Service Description set out in Annex B to this draft Order;
 - b. Target Availability for the ICLSC as set out below:

| Calculation | Target Availability |
|---|---------------------|
| Target Availability for periods free of Covered Failure | 99.9% |

- c. The following response times and restoration times:

| Fault Type | Response Time | Restoration Time | Threshold Response Time | Threshold Restoration Time |
|-----------------|---------------|------------------|-------------------------|----------------------------|
| Covered Failure | 10 minutes | 3 hours | 15 minutes | 5 hours |

64. Service rebates shall apply to failures to meet the service levels, calculated as Service Credits (i.e. that amount represented by two percent (2%) of the monthly Charges for the ICLSA service) in the multiples specified in Section 6 of the Service Description set out in Annex B to this draft Order.
65. Batelco’s draft Service Description also provides that if its personnel are requested by an Access Seeker to physically attend the cable landing station to support testing of an ICLSC service, its standard rates would apply. In contrast, the Authority considers that additional rates should not be charged if the physical presence of Batelco personnel is integral to testing any ICLSC service and, in actuality, will not be an optional on request service, but instead will be needed by the Access Seeker for every new ICLSC service. The Authority therefore seeks

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submissions on whether Access Seekers expect that Batelco’s on-site support at the cable landing station for testing of a ICLSC service will be necessary in any case. It also seeks views on how such costs should be covered.

Q4. Do you agree with the Authority’s proposed service level terms and penalties for the ICLSA Service? Please explain and justify your position

Summary and assessment of consultation responses

In this table, the Authority provides a summary of and a response to stakeholders’ comments in relation to question 4.

| Summary of stakeholders’ submissions | The Authority’s analysis and responses |
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| <p>Batelco disagrees with the levels and penalties proposed by the Authority. It believes the service level parameters proposed under the Draft Order are too stringent and requests the Authority revert to the response and restoration times originally proposed by Batelco. It also argues that service credits are not necessary or justified. Batelco wants target availability to be reduced significantly.</p> <p>In justifying its position, Batelco argues that setting Target Availability at 99.9%, alongside rebates (in the form of service credits) for not meeting this target, while also reducing the prices for the ICLSA service from the levels proposed by Batelco could lead to it not making a reasonable return on the service, as this means it would be required to provide a near flawless level of service, at much lower prices as also proposed under the Draft Order</p> <p>Specifically, Batelco notes that the proposed level of Target Availability is greater than that imposed on BNet through its RO. It believes that the Target Availability for the ICLSA service should be consistent with that imposed on BNet for its Wholesale Data Connectivity (WDC) product, which it considers the primary access product for ICLSA.</p> <p>It also argues that because its CLSs are unmanned facilities, the Authority must factor in the time needed to travel to a CLS where a fault arises, thus meaning a restoration time of three hours is unlikely to be feasible.</p> | <p>The Authority considers that the provision of international connectivity services is key to the welfare of the Kingdom of Bahrain. In that respect the Authority would expect SLAs and KPIs, including the payment of service credits, to reflect the importance of the connectivity service as well as respecting the factors relating to the provision of such an essential service.</p> <p>Having considered the positions of all the parties responding to this consultation and taking into account the nature of the ICLSA service, the Authority concludes that it is appropriate to amend a number of the SLAs and KPIs to mirror those set out in BNet’s RO, taking BNet’s WDC service as a benchmark against which to consider the appropriate level of SLA for the ICLSA service.</p> <p>However, the Authority concludes that the Target Availability should remain at the level included in the draft ROO (99.9%). The Authority considers this is reasonable, taking into account the fact that the ICLSA service is a solution based on technology which should be stable with only very limited periods of downtime, while recognising that the service may be provided in unmanned locations. The Authority has considered Batelco’s submission in this regard. Based on this, it continues to believe that the restoration time KPIs included in the draft ROO remains appropriate. While the CLS may be unmanned facilities, it is still important for faults to be rectified swiftly. Given the location of these in Bahrain, the Authority does not believe that a three-hour KPI would be unreasonable.</p> |

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| <p>STC disagrees with the levels and penalties proposed by the Authority and notes that these are unchanged from those set out in the IFC Service Description.</p> <p>It argues that Service Credits are a poor and inadequate substitute for the level of risk of liquidated damages payable to retail business and Government customers arising from service faults, delays in provisioning connections or repairs/restoration of service. Further, it believes the Service levels are not high enough to act as a safeguard to discourage this from happening. In the absence of separating the international assets from Batelco's retail business, it believes this revised regime is a first step to creating more fair and reasonable incentives for Batelco not to engage in discriminatory behaviour.</p> <p>STC proposes that the KPIs be set out in a table in Clause 6 (General Terms) of the Service description, rather than special condition in Annex 3</p> <p>STC then proposes a set of milestones for service delivery, as follows:</p> <ul style="list-style-type: none"> • Service Request Acknowledgement: 2 business days (for both ICLHS and ICLCS). • Service Request Acceptance: 10 business days for both service (subject to Batelco receiving a correctly and fully completed service request). • Raising Orders in the System: N/A – it proposes this KPI is removed. • Joint Site Survey: 3 business days for both services (if required and after the Access Provider receives a request). • Service Handover for ICLHS where colocation is required in the CLS: 5 business days if no additional physical resources are required, otherwise 20 business days, reflecting STC's understanding that space and power for access seekers is already in place at the three CLSs. • Service Handover for ICLHS for remote colocation: 10 business days where fibre is available, 20 business days where there is no fibre available but sufficient duct space exists to pull an additional fibre cable, and 60 business days or exceptional delivery, where additional | <p>The Authority notes STC's comments and responds, below, to the individual points it has made.</p> <p>In preparing the final Order, the Authority has taken account of STC's comments, alongside those of other stakeholders, to develop a set of KPIs / SLAs, including penalties, which it considers to be fair and reflective of the nature of the service. To the extent that it is available, it remains the operators' prerogative to seek legal address if operators wish to do so. These are not intended as the sole and exclusive remedy for the Access Seeker. The Authority notes that it currently has no plans to require Batelco to separate its international assets, and that should Batelco engage in discriminatory behaviour, then that conduct could be caught by Article 57 and/or Article 65 of the Law.</p> <p>The Authority agrees that in respect of KPIs it is appropriate for these to be set out in clause 6 of the main body of the Service Description.</p> <p>The Authority responds to STC's specific proposals as follows:</p> <ul style="list-style-type: none"> • Service Request Acknowledgement: The Authority notes STC's proposal is in line with that in the draft Order. The Authority maintains the level from the draft ROO. • Service Request Acceptance: STC's proposal is in line with that in the draft Order. The Authority retains the level from the draft ROO. • Raising Orders: The Authority proposes to amend this to one business day, in line with comments received from Zain (see below). • Joint Site Survey: Again, STC's proposal is in line with that in the draft Order. The Authority retains the level from the draft ROO. • Service Handover: Taking into account the stakeholder responses, the Authority amends this SLA, in the Batelco Order, to be five business days where no new physical resources are required and to twenty business days where new resources are required. The Authority considers this is reasonable and allows for the fact that Batelco may need to import equipment. The Authority also notes this is consistent with the same SLA imposed on BNet's WDC service and should apply to all circumstances / scenarios identified by STC. For the avoidance of doubt, this SLA shall also be |
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| <p>duct must first be laid. STC argues this is appropriate as it mirrors delivery times for BNet’s WDC product.</p> <ul style="list-style-type: none"> • Service Handover for ICLCS: 2 business days for upgrades / downgrades (reflecting STC’s view that this does not require physical resources) and 5 business days for new requests (due to the limited nature of work required within the CLS). • For the licensed operator to confirm Service Acceptance: for both services, 2 business days from service handover date. <p>STC then further proposes:</p> <p>a) For the Delivery Lead Time service credits for ICLSA, increasing the level of proposed service credits for delays of more than 10 Business Days from 20 Service Credits to 50 Service Credits per day or part of a day until delivery (rather than just a one off 20 Service Credit rebate), meaning that in serious cases of delayed delivery, the access seeker would be rebated 2 months’ charges per day for the connection.</p> <p>b) Reduction in the proposed Threshold Restoration Time for Covered Failures from 5 hours to 3 hours and the Restoration Time to 2 hours.</p> <p>c) Service credits for fault response to be changed to 15 service credits for each 30 minutes or part of 30 minutes where the maximum Response Time exceeds the Threshold Response Time of 15 minutes.</p> <p>d) For the ICLCS, introduction of a separate service credit regime to cover persistent but minor faults where there has been three or more covered failures (priority one service loss rather than priority two service degradation as defined in the draft service description) in a rolling 3 calendar month period. Where this occurs, STC proposes that monthly charges for the ICLCS at that existing capacity should be waived for a 12 month period and only resumed if the three or</p> | <p>applied to upgrades / downgrades and new orders for ICLCS as well as for ICLHS.</p> <ul style="list-style-type: none"> • Service Acceptance: the Authority considers that the service should be accepted, or deemed to be accepted, 2 business days following the date of Service Handover in accordance with clause 6.4(a). The acceptance of the ICLCS and ICLHS should not be dependent upon the confirmation of other services associated with the end to end provision of an international connectivity service but which are outside of the scope of this Service Description. <p>Taking into account the responses of all stakeholders, the Authority believes that the service credit regime for BNet’s WDC service provides a suitable basis for setting the credits for the ICLSA. Accordingly, the final Order sets that 50 Service Credits should be awarded to the Access Seeker for failure to meet the target SLA for delivery, with 25 Service Credits for each additional working day thereafter until service is available. The Total Service Credit Cap has been deleted in the Service Description but it is provided that, without prejudice to the Access Seeker’s rights to recover damages from the Access Provider, in relation to any month, Service Credits will not exceed the amount of the monthly Charges for the ICLSA Service..</p> <p>The Authority has noted STC’s proposal in this regard. However, STC has provided no evidence as to why the terms in the draft Order were not appropriate. The Authority also notes those terms are consistent with those for BNet’s WDC service, once taking into account the “standard” and “premium” levels of support offered. The Authority therefore maintains the levels set out in the draft Order.</p> <p>With regard to d), the Authority does not consider that such a separate service credit regime would be appropriate at the level proposed by STC. Individually, covered failures are subject to a service credit and these have been reviewed by the Authority as part of this consultation process.</p> |
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| <p>more priority one covered failures is not repeated in that 12 month period.</p> <p>e) Removal of the caps on service credits, being the Total Service Credit Cap of 40% of the monthly charges and the Availability Rebate Cap being 20% of the monthly Charges for the ICLSC.</p> <p>f) Excluding clause 10.6 (service credits as a sole remedy) of the Supply Terms from this service description and amending the definition of Consequential Loss so that loss of business revenue can be a possible heading of loss in respect of a contractual damages claim.</p> <p>g) Increasing the Service Credit unit from 2% of the monthly changes for the service to 5% of the monthly charges.</p> <p>Finally, STC notes a number of contractual provisions in the RO which continue to safeguard the Access Provider, even if all the above changes were suggested.</p> | <p>The Authority proposes to amend the service credit regime to align with that for BNet’s WDC service. Accordingly, the Batelco Order sets that 20 Service Credits shall be payable for failure to meet the Threshold Restoration Time, with 10 Service Credits for each additional hour exceeding the Maximum Restoration time. Again, the Total Service Credit Cap has been deleted in the Service Description but it is provided that, without prejudice to the Access Seeker’s rights to recover damages from the Access Provider, in relation to any month, Service Credits will not exceed the amount of the monthly Charges for the ICLSA Service.</p> <p>The Authority has noted STC’s comments.</p> |
| <p>Zain disagrees with the service levels and penalties proposed by the Authority.</p> <p>Specifically, it considers that the proposed service level terms and penalties are not stringent enough and not proportionate to the critical nature of this product to the Access Seeker’s network operation. It argues that operators have a high dependency on any activated international capacity, and despite the operator’s effort to diversify international routes, each route must have a high availability target and a short restoration period. It argues that the proposed service level terms and penalties are inherited from the IFC Service Description. However, according to Zain, the technical solution of the IFC encompassed a transmission layer as the product was coupled with Duct Access. Therefore, this additional layer was accounted for in the development of IFC service level terms. Although Zain states it disagrees with the inclusion of Batelco’s active equipment in the service description, it believes the ICLSA is still a straightforward technical solution. In conclusion, it believes the proposed target availability and restoration times do not reflect the solution’s required efforts and technical topology.</p> <p>Zain also makes specific proposals for service delivery times in its response to Question 6.</p> | <p>The Authority notes Zain’s comments.</p> <p>As set out above in response to STC’s comments, the Authority has taken account of stakeholder comments to develop a set of KPIs / SLAs, including penalties, which it considers to be fair, and reflective of the nature of the service. In so doing, the Authority has used BNet’s WDC service as a benchmark, given that this reflects a wholesale service that may be used to serve retail corporate customers and for which the Authority recently reviewed the KPIs.</p> <p>The Authority responds to Zain’s specific proposals below, in responding on Zain’s comments to Question 6.</p> |

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| <p>Nuetel argues that the SLA for Service Availability should be 99.95% or higher, to meet requirements of customers such as the US Government and Amazon.</p> | <p>As set out above in response to Batelco’s comments, the Authority has maintained, in the final Order, a Target Availability for the service of 99.9%.</p> <p>The proposed SLA is in line with other similar services. In taking into account the end-to-end service availability requirements of customers, it is important to note that international connectivity is only one part of the design of resilient and high-quality services requested by customers. Setting a higher SLA on the ICLSA service will not, therefore, increase the overall SLA that can be offered to retail customers for end to end services.</p> |
| <p>Infonas agrees with the Authority's proposed SLA terms and penalties, subject to the following amendments. It believes that not accepting these would put the Access Seekers at a high risk due to their SLA's with end users. Specifically, Infonas proposes:</p> <ul style="list-style-type: none"> a) The Availability Rebate Cap to be changed from 20% to 100% of the monthly charges. b) The SD should include an escalation matrix for service delivery and fault management (to ensure response time in case of faults situation/late delivery) c) Access Seekers should have the right to claim reimbursement for liquidated damages based on the end customer’s contract value, in case Batelco defaults on delivery requirements. | <p>As previously stated, the proposed SLAs are proportionate and based on SLAs for an existing service currently in operation in the Kingdom.</p> <p>Such a proposed rebate cap is not in line with SLAs provided for similar services.</p> <p>The Authority agrees that this should part of the operational and maintenance process that should be published alongside of the reference offer.</p> <p>The Authority requires the Supply Terms to be amended to clarify that service credits are not the sole and exclusive remedy.</p> |

The Authority’s final decision

Taking into account all of the stakeholder responses, the Authority has concluded it is appropriate to order Batelco to provide the ICLSA service in line with the SLA and service credit parameters set out in the Service Description as included in in Annex B of this Order and which Batelco is ordered to adopt. This shall also clarify that service credits shall not be the sole and exclusive remedy for a Batelco failure or refusal to meet the SLA.

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Q5. Do you agree that if physical presence of Batelco personnel is integral to testing, additional standard rates should not be charged, with such costs instead being captured in Batelco’s one-off charge? Please explain and justify your position

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders’ comments in relation to question 5. | |
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| Summary of stakeholders’ submissions | The Authority’s analysis and responses |
| <p>In its response, Batelco notes that its proposed ICLSA service installation charges include the cost of Batelco personnel attending on-site for initial service provisioning and testing. As such, it would not levy an additional charge for such attendance and an additional charge would only apply for “hands & eyes support”.</p> <p>Batelco clarifies that this describes a co-location service where the Access Seeker can choose to delegate IT and/or network maintenance tasks at the CLS to technicians employed or engaged by the Access Provider. This optional additional charge would not apply to any service fault that required physical inspection.</p> <p>Batelco also notes that the draft Order includes significantly reduced installation charges, compared to those initially proposed by Batelco. It argues this creates a financial risk for Batelco given the cost of engineering expertise required to set up the ICLSA service. It argues that such costs should not be excluded by the Authority, with an Access Seeker paying an ICLSA installation charge that includes all reasonable, efficient, and unavoidable costs incurred by the Service Provider, and that such costs should all be factored into the ICLSA installation charges.</p> | <p>The Authority notes that Batelco’s proposed ICLSA service installation charges include the cost of Batelco personnel attending on-site for initial service provisioning and testing. This is now clarified in the final Service Description.</p> <p>The Authority notes this. Should an OLO wish to source additional resources from Batelco that are not covered by the service description of the ICLSA service, then it should reach a commercial agreement with Batelco on this. As such, this should not be included in the RO.</p> <p>With regard to the installation charges included in the Draft Order, the Authority wishes to clarify that it excluded from the charges, those costs that the Authority does not consider necessary (such as active equipment between the SLTE and BNet or OLO co-location at the CLS). Such equipment and related costs were clearly defined in Batelco’s cost data. No other costs have been removed, especially those related to the installation of the cross connect</p> |
| <p>STC disagrees with the Authority’s draft position. It argues that such expenses should not be automatically included in one-off charges, as there may be occasions where such costs are not incurred.</p> <p>Instead, STC believes there should be reasonable standard additional rates levied for when the physical presence of Batelco staff is required, as STC Bahrain does not know its exact requirements</p> | <p>The Authority considers that the physical presence of Batelco personnel is integral to testing any ICLSC service. This means it will not be an optional “on request” service, but instead will be needed by the Access Seeker for every new ICLSC service. As such, the Authority considers it is reasonable to include these costs in the one-off charges, rather than being charged as a separate service. It considers this is beneficial, as it increases the transparency of the</p> |

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| <p>for testing, since there may be occasions when the presence of Batelco personnel is not needed, but in other cases some additional support and presence may be required.</p> | <p>service and of the related charges, while minimising the number of “add-ons”.</p> |
| <p>Zain agrees that Batelco personnel will need to be present during service delivery and any associated testing, as this is a requirement and part of the ICLSA service. However, it believes these costs (operational cost of the resources at the landing station) are already fully accounted for in the recurring charges, so should not be levied via a one-off charge. Therefore, it states that it does not foresee any merits in recovering the cost again via a one-off charge.</p> <p>Zain also sets out that, for the avoidance of doubt, Batelco should not charge the Access Seeker any additional fee if the presence of Batelco’s personnel is required for any other situation, including for service restoration. This is because, according to Zain, the Submarine Cable Owner already covers this via the annual Operation and Maintenance Allowance (“O&M”) paid to the Landing Party.</p> | <p>The Authority considers that the installation of a cross connect link and corresponding testing does not form part of the normal activities of the staff at the cable landing station and therefore needs to be considered in addition to normal operating expenses. The one-off charges determined by the Authority are based on information provided by Batelco and correspondingly take into account an estimate of the number of hours that the installation and testing of a newly established link is likely to take.</p> <p>The Authority agrees, that service restoration, even if the presence of Batelco personnel is needed, should not incur any charges for access seekers as this forms part of the of the normal operation of the landing station.</p> |
| <p>Nuetel agrees with the Authority’s draft position. This is because, in Nuetel’s opinion, testing is offered as part of the service and is part of the cost used to derive the one-off charges.</p> | <p>The Authority notes Nuetel’s acceptance of the position set out in the Draft Order.</p> |
| <p>Infonias agrees with the Authority’s draft position, that testing is part of the service delivery, and should remain part of the service with no additional cost. However, Infonias believes a statement should be included in the SD to cover the physical presence of Batelco Personnel to attend and troubleshoot a fault at no additional charge.</p> | <p>The Authority notes that Infonias accepts the position set out in the Draft Order. Batelco has acknowledged that the ICLSA service installation charges include the cost of Batelco personnel attending on-site for initial service provisioning and testing and there is no additional charge for such attendance. A statement to this effect is included in the final version of the Service Description.</p> |

The Authority’s final decision

The proposed ICLSA service installation charge should include the cost of Batelco personnel attending on-site for initial service provisioning and testing, rather than this being charged separately. This is clarified in the final Service Description, which Batelco is ordered to adopt.

2.4 Other terms and conditions

66. The structure of the Existing RO is such that new services can easily be added, or removed, through the addition (or removal) of a Service Description. That is, the Existing RO is drafted on the basis that each of the services that Batelco must offer has a Service Description under Schedule 1. The Authority considers that this is also the case for the ICLSA.
67. In preparing the Service Description for the ICLSA the Authority required Batelco to set out, only to the extent necessary, a list of those other provisions in its Existing RO which shall not apply to the ICS, or which are amended for the ICLSA. The Authority’s incorporation of Batelco’s proposals in this regard are set out at in Annex 3 (Special Conditions).
68. Batelco has also proposed amendments to the definitions in Schedule 8 (Dictionary and Rules of Interpretation and Construction) of its Existing RO in order to accommodate the ICLSA Service but presented this as requiring a separate amendment to Schedule 8, rather than including amendments along with other special conditions in the ICLSA Service Description. The Authority considers that changes to Schedule 8 for the purposes of the Service Description for the ICLSA service can be properly incorporated in Annex 3 (Special Conditions), as any such changes should be applicable to the ICLSA service only and not be extended to the entire Existing RO. The Authority has reflected this in Annex B to this draft Order.

Q6. Do you agree with the proposed amendments to the Existing RO in Annex 3 (Special Conditions) as being necessary and applicable to the ICLSA Service (for the purposes of ICLSA Service only)? Please explain and justify your position.

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders’ comments in relation to question 6. | |
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| Summary of stakeholders’ submissions | The Authority’s analysis and responses |
| Batelco states it does not object to the proposed amendments to the Existing RO in Annex 3 (Special Conditions) except for such amendments as relate to service level parameters and related Service Credit rebates (as per Batelco’s response to Question 4). | The Authority notes Batelco’s response. It has responded in Question 4 to Batelco, and other party’s comments, around SLAs and Service Credit rebates. |
| STC does not object to the use of special conditions in Annex 3 to modify other parts of the supply terms. However, it has then made a number of detailed comments in track changes to the proposed Annexures, which it summarises in its response to this question as follows: | The Authority notes that STC does not object to its proposal. In preparing the Annexures in the Batelco Order the Authority has also taken into account STC’s proposed mark-ups. With regards to STC’s summary comments, included in its reply to Question 6, the Authority responds as follows: |

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| <p>STC comments that the Body Terms appear to be informative in nature rather than binding. Given this, it proposes that milestones, for example, appear in the Service Description with the drafting. Linked to this, STC raises the question of when the overall RO will be updated, though it recognises this is beyond the scope of this consultation.</p> <p>STC refers to the possibility of including additional conditions agreed mutually in writing between the parties as part of information to be included in the service request.</p> <p>STC notes that only the ICLSC service request form is included in the documentation at the moment, and not the Direct ICLHS form or Service Handover Letter template.</p> <p>It proposes that all order processes should be summarized in the Service Description rather than as a change to Schedule 5. STC believes, if this change is implemented, that the order process as summarized in Schedule 1 would take precedence over the more general process in Schedule 5.</p> <p>It does not agree that Service Handover is also the Actual RFS Date as proposed in the definition change. According to STC, the Actual RFS Date should be the date when milestone 7 is completed and billing commences, that is the acceptance (or deemed acceptance) after testing by the Access Seeker. According to STC, this reduces the risk of paying for a service which is not activated.</p> | <p>With regard to the timetable in Clause 6.1 of the Body Terms the Authority has provided that the KPIs in clause 6.1(c) of the Service Description apply for the purposes of the ICLSA..</p> <p>The Authority notes STC's comment. However, it is concerned to ensure that Batelco should not discriminate in terms of offering different services or terms to different access seekers. As such, parties should not have the ability to agree different terms for the RO service without these also being available to other parties.</p> <p>The Authority agrees that the Direct ICLHS form or Service Handover Letter template need to be added to the Service Description. Batelco is required to include this in its amended RO.</p> <p>The Authority does not consider that it is necessary to have the order process summarised in the Service Description when the Service Description is to form part of the Existing Batelco RO.</p> <p>With respect to the Actual RFS Date being when acceptance (or deemed acceptance) after testing by the Access Seeker is completed, the Authority considers that making a change to the definition to avoid Access Seekers paying for a service that is not functional has merit. The Authority notes that Nuetel makes a similar submission and so it implements this amendment in the final Order. However, payments for the service must not be held back because other components of the Access Seeker's end to end service have not been delivered or are not functional.</p> |
| <p>In responding to this question, Zain raises a number of concerns with the proposed terms and conditions, alongside making the general point that any clauses which are limited to the ICLSA should be included in the Service Description.</p> <p>These are set out below.</p> <p>Firstly, Zain is concerned with the suggested addition by Batelco to Clause 3.1 of the Body</p> | <p>The Authority notes Zain's comment. However, it believes that the approach set out in the Draft Order remains appropriate, to avoid creating any inconsistency between the ICLSA Service Description and the rest of Batelco's RO.</p> <p>With regard to Zain's additional points:</p> <p>The Authority notes Zain's concern. As set out above, it will seek to ensure that Batelco does not discriminate</p> |

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| <p>Terms as, in Zain’s view, this may lead to discrimination between Access Seekers. If this addition is necessary, it proposes including the following wording:</p> <p><i>“Any other terms that has <u>have</u> been agreed between the Access Provider and the Access Seeker set out in the Service Request, <u>provided that such terms are made available to all Access Seekers.</u>” [addition underlined]</i></p> <p>With regards to the timeframe for service delivery, Zain does not see any justification to replace the current timetable under Clause 6.1 of the Body Terms. In this regard, it points out that there are no specific tables for other Reference Offer services such as International Private Leased Circuits (“IPLC”) and Facility Access Service (“FAS”) in the Body Terms. It considers, therefore, that the ICLSA timetable could be embedded in the ICLSA Service Description.</p> <p>Zain further sets out its view that the proposed timeframes to deliver the ICLSA are very unrealistic and impractical for business purposes. It argues that because the Submarine Cable is already landed and connected to the Submarine Line Terminal Equipment (“SLTE”), this timeframe can be reduced, especially given the simple technical solution required for this product. Zain therefore proposes that the service could be handed over within five days from raising the Service Request, if no additional physical resources are required and within ten days if they are. Specifically, Zain argues that the following timeframes are set:</p> <ul style="list-style-type: none"> • Service Request Acknowledgement – 1 business day. • Service Request Acceptance – 2 business days, subject to an accurately completed Service Request. • Raising Orders in the System – 1 business day. • Joint Site Survey (if required and after the Access Provider receives a request from the Access Seeker) – 3 business days. • Service Handover – 5 business days from raising the request in the systems, if no new physical resources are required, and 10 days if such resources are required. • Confirming Service Acceptance – 2 business days from Service Handover date. <p>Zain also argues that Clause 7 of the Body Terms are generally applicable to all new services under Batelco Reference Offer and so should not be</p> | <p>in terms of offering different services or offer different terms and conditions to different Access Seekers. As such, parties should not have the ability to agree different terms for the RO service. The Authority has, therefore amended Clause 3.1 of the Body Terms accordingly.</p> <p>The Authority has responded above, in Question 4, to comments made by other stakeholders in respect of the service delivery timeframes and KPIs, and directs Zain to its response there.</p> <p>In regard to Zain’s specific proposals, the Authority considers it is appropriate to amend the SLA for Service Handover to five days if no additional physical resources are required and twenty days if such resources are required. It also directs Zain to the Authority’s responses to Question 4, where it has set out its views on all SLAs.</p> <p>The Authority has provided that the Access Provider is to provide the ICLSA as per the revised Key Performance Indicators (“KPIs”) set out in the table set out in clause 6.1(c) of the Service Description.</p> <p>The Authority notes Zain’s comment. It agrees that the general clauses of the RO should apply, unless</p> |
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| <p>excluded. It believes that any specifics that are limited to the ICLSA must be enclosed as part of the Service Description.</p> <p>It also comments that this should relate to Schedule 5, where if any specific term is to apply only to the ICLSA it should be included in the Service Description.</p> <p>In relation to Clauses 3.5 and 3.6 of Schedule 6, Zain does not agree with the exclusion and changes proposed respectively by Batelco to these clauses. It believes Clause 3.5 is still of relevance as a fault could occur at the Access Seeker's equipment hosted in the landing station or at Batelco's side while handing over passively to the SLTE (taking into account Zain's comments about Batelco's unnecessary active equipment in the proposed ICLSA topology – see Question 9, below). Similarly, Zain argues that Clause 3.6 specifying the national segment is irrelevant because the scope of the product is defined within the Service Description itself. It believes that any issue with international capacity or domestic connectivity will be clearly visible to the Access Seeker and can be investigated directly with the service provider.</p> <p>With regards to adding "Body Terms" under Clause 1.2 of Schedule 9, Zain is of the view the main body of the Supply Terms takes precedence on the Body Terms. Therefore, Batelco's addition should be listed as the 4th in the list.</p> <p>Finally, Zain notes that Schedule 9 governs supply terms to all services provided under the Reference Offer. It believes the current text of Clause 2.2 is sufficient to address the termination scenario for the ICLSA service. Therefore, it argues that the proposed amendment by Batelco is not necessary. Zain also regard that the proposed addition of clause 15.7 is equally unnecessary.</p> | <p>otherwise specified in the Service Description. Given this, it has reinserted Clause 7 of the Body Terms.</p> <p>With respect to the comments on Schedule 5, the Authority has maintained consistency between the Service Description and Schedule 5 but has used the mechanism of the Special Conditions rather than revising Schedule 5 in its entirety .</p> <p>The Authority agrees that clause 3.5 concerning who should take responsibility for a reported Fault is still relevant and should not be excluded. However, Batelco's proposal that the NOC should only investigate Faults related to the ICLSA Service is appropriate and so are the references to the national segment as this adds clarity.</p> <p>For consistency, the Authority is adding wording that Clause 3.6 applies notwithstanding clause 3.5.</p> <p>While the Authority agrees with the point of precedence of the Body Terms, on review the Authority considers that changing the precedence in Schedule 9 by inserting reference to the Body Terms for the ICLSA Service only is not needed. The Service Description (which has highest precedence) indicates and incorporates changes to the Body Terms. The Authority has amended the special conditions to remove this change to the order of precedence.</p> <p>As the Service Description has specific provisions concerning termination, these need to be recognised in Schedule 9 as provided by the Authority. As such, the Authority disagrees with Zain's proposal.</p> |
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| <p>In its response, Nuetel has proposed that the following amendments be made in Annex 3, with all related clauses and statements in the RO being updated to reflect these:</p> <p>1. The KPI for “Confirm Service Acceptance by Licensed operator” (<i>Clause 6.1 of the Body Term, Item 7</i>) should be set to three days. According to Nuetel, this will allow the Access Seeker to run the end-to-end test, which takes 72 hours, as per the standard requirement of major customers, such as the US Government.</p> <p>2. In Clause 6.1 of Schedule 5 (Ordering and Provisioning), the handover must be supported with a successful 72-hours test report.</p> <p>In Schedule 8 (Dictionary and Rules of Interpretation and Construction, “OLO” should be replaced with “Access Seeker”.</p> | <p>The Authority notes Nuetel’s response and directs it to the revised Service Description in this Order.</p> <p>The Authority has maintained this KPI as set out in the draft Order. It notes no other respondents raised this point. However, clearly an Access Seeker should not be required to pay for a service which is not operational.</p> <p>The Authority does not believe that a successful 72 hour test report is required for Service Handover and notes this is not a requirement for other RO services. However, clearly an Access Seeker should not be required to pay for a service which is not operational.</p> <p>The Authority agrees with Zain’s comment and has amended the instructions in relation to Schedule 8 accordingly.</p> |
| <p>In line with its earlier comments, Nuetel also argues that the definition of Actual RFS date should be amended to include reference to the 72-hours test report: “<i>Actual RFS Date means the date on which Access Seeker receives the RFS Certificate or Service Handover supported with successful 72-hours test report.</i>”</p> <p>All RO and Annexes related clauses and statements must be updated to reflect these changes if the above suggested changes are approved.</p> | <p>As set out above, the Authority does not consider that this is necessary or appropriate and therefore does not make this amendment in the final Order.</p> <p>As set out above, the Authority does not consider this change to be necessary. Furthermore, this Batelco Order does not serve to review all other Service Description and Schedules under the existing RO.</p> |
| <p>Infonas states that it agrees with the amendments, subject to the following changes:</p> <p>Clause 6.1 in the Body Terms: KPI No.6 (Handover of the service) should be reduced from 60 business days to 10 days. This is because Infonas believes that 60 business days is excessive and likely to be rejected by end users. Infonas states that cross connects are generally delivered within one week.</p> | <p>The Authority notes Infonas’s comment. It notes STC and Zain have also raised concerns over this KPI and so directs Infonas to its response to STC (Question 4) and Zain (Question 6).</p> |

The Authority’s final decision

The Authority has considered carefully the comments it has received from stakeholders in respect of the proposed amendments to the existing Batelco RO set out in Annex 3 of the Service Description, together with the stakeholder comments on the ICLSA Service Description more

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generally. Where appropriate, and as reflected by its responses set out above, the Authority has reflected these comments in the revised Service Description included in this final Order. A Direct ICLHS service request form or Service Handover Letter template must to be added to the Service Description by Batelco as procedures for ordering and provisioning of Access services.

Q7. Do you agree with the proposed amendments to definitions in Schedule 8 of the Existing RO as being necessary and applicable for the ICSLA Service? Please explain and justify your position.

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders' comments in relation to question 7. | |
|--|---|
| Summary of stakeholders' submissions | The Authority's analysis and responses |
| Batelco states it does not object to amendments proposed by the Authority, except for such amendments as relate to service level parameters and related Service Credit rebates (as per Batelco's response to Question 4). | The Authority notes Batelco's response. It has responded in Question 4 to comments around SLAs and Service Credits. |
| <p>STC submits some amendments in an annotated version of the service description. It then highlights the following points in its response to this question:</p> <p>That the definition of cable landing station should include the future possibility of access to terrestrial cables, as well as a reference to where the terminating equipment is housed, not just where the cable lands, since this could be in two separate places. According to STC, this language more closely follows ITU-T recommended definitions (as per Rec. ITU-T G.972 (11/2016) definition of terminal station).</p> <p>For the definition of the ICLSC and ICLSH in clause 1.3 of the draft service description, STC proposes language mirroring concepts used in the European Union's EECC for associated or ancillary services</p> | <p>The Authority's proposed changes and responses to comments on the draft ICLSA Service Description, to the extent not already addressed in the responses above, are attached as Annex B of this Order.</p> <p>With regard to the definition of cable landing station, the Authority notes that the remedy is specifically focused on submarine cables. It does not, therefore, accept a need to refer to terrestrial cables in its definition. It has, however, reviewed the ITU definition referred to by STC and considers this has merit. It will, therefore, update this definition accordingly.</p> <p>The Authority notes STC's comment. However, it is comfortable that the service is appropriately defined to meet the requirements of the remedy set out in the Determination. As such, further changes are not required.</p> |

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| <p>Zain submits the following suggestions for amending the definitions.</p> <p>a) Instead of referring to “duly licensed operator”, it recommends that paragraph 1.2 of the draft Service Description refers specifically to operator holding the Individual International Telecommunications Facilities License (“IFL”) to acquire ICLSA service.</p> <p>b) In order to complement the definition section of the Service Description, clear demarcation points for the ICLSH, ICLSC, Domestic Point of Handover and International Point of Handover must be illustrated on the technical solution drawing enclosed in the Service Description.</p> <p>c) With regards to Batelco’s proposal of inserting the words “or Service” in the definition of “Cancellation Request”, Zain notes that “Connection” is not defined in the Service Description nor in Schedule 8.</p> <p>d) It notes that the deletion of the word third parties is unnecessary as it on the definition of “Complex Case”.</p> | <p>The Authority considers it appropriate to retain the terminology of “duly licensed operator”. This will ensure broader accessibility to ICLSA services and also ensure that the Service Description is future proof against any changes to licence categories.</p> <p>The Authority notes Zain’s suggestion. However, it considers that the demarcation points for the handovers are already clearly shown and so will not amend this in the Service Description.</p> <p>The Authority has reviewed the definition of “Cancellation Request” and will amend this by including the word “Service” in place of the word “Connection”.</p> <p>The lack of reference to “third parties” in definition of “Complex Case” has been noted and the amendment to the definition of “Complex Case” will be removed as it is unnecessary.</p> |
| <p>In its response, Nuetel proposed the following changes to the definitions:</p> <p>a) Mean Restoration Time and Target Availability: change the measurement period from a quarter (3 months) to one month. Nuetel states that this is because customers sign SLAs based on monthly measurement as a standard in the telecoms industry.</p> <p>b) Service Commencement Date: Nuetel states that the definition in the draft Order refers to clause 7.4 which is the Termination clause. It believes it should instead refer to clause 6.5.b.</p> <p>c) Service Period: the definition on (Page 32/54) states “ ... which continues automatically as per the initial term</p> | <p>The Authority considers that changing the measurement period from a quarter (3 months) to one month, due to the fact that customers sign SLA based on monthly measurements as a standard in the telecoms industry, has merit. It has therefore made that amendment in the Batelco Order.</p> <p>Nuetel’s comment is noted. The reference to clause 7.4 has been amended in the final Service Description, as proposed by Nuetel.</p> <p>The Authority considers the suggested amendment to the Service Period, so that the contract shall continue, after the initial term, as monthly rolling contract, with</p> |

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| <p>mentioned in the order until terminated”. This means the contract will be automatically renewed for another year. In contrast, Nuetel proposes that the term should continue as a monthly rolling contract with 30-day notice from the Access Seeker.</p> | <p>30-day notice from the Access Seeker is reasonable, unless otherwise agreed in the Service Request. It has therefore made that amendment in the Final Order.</p> |
| <p>Infonas did not respond to this question.</p> | |

The Authority’s final decision

The Authority has considered carefully the comments it has received from stakeholders in respect of the proposed amendments to the definitions in Schedule 8 of the existing Batelco RO and the extent to which these are necessary for the ICLSA service. Where appropriate, and as reflected by its responses set out above, the Authority has reflected these comments in the revised Service Description and annexures included in this final Order, and which Batelco is ordered to adopt.

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Q8. Do you agree that the proposed amendments to definitions in Schedule 8 of the Existing RO should be included in the RO in Annex 3 (Special Conditions) of the ICLSA Service Description, so that they do not affect the Existing RO and the provision of other services by Batelco under the Existing RO? Please explain and justify your response.

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders' comments in relation to question 8. | |
|---|---|
| Summary of stakeholders' submissions | The Authority's analysis and responses |
| Batelco states that it does not object to any of the amendments to the definitions in Schedule 8 of the Existing RO being included in Annex 3 (Special Conditions) of the ICLSA Service Description. | The Authority notes Batelco does not object to its proposal. |
| STC states that it agrees with the approach as it recognizes that there will be future opportunities to comment on general changes to other parts of Batelco's Reference Offer. | The Authority notes STC's agreement with its proposal. |
| Zain disagrees with including different definitions under Annex 3 of the ICLSA Service Description. The basis for its disagreement is that the Reference Offer structure should be general, with Schedule 8 having a compiled/consolidated list of definitions used across all the Service Description and Schedules. Zain notes that any specific term or definition that are applicable only to the ICLSA should be defined differently with a separate terminology and those new definitions are to be added to Schedule 8. | The Authority, for the reasons set out in the consultation, is not opening up all of the Existing RO and its Service Descriptions and Schedules for review under this Order. The intent is to amend the Existing RO to the extent that it is necessary for the purposes of the ICLSA service only. Given this, the Authority is satisfied that its direction is reasonable. |
| Nuetel agrees with the Authority's draft position. | The Authority notes Nuetel's agreement with its proposal. |
| Infonas agrees with the Authority's draft position. Moreover, it agrees with amendments to definitions in Schedule 8 of the Existing RO should be included in the RO in Annex 3 (Special Conditions) of the ICLSA Service Description, so that they do not affect the Existing RO and provision of other service by Batelco under the Existing RO. | The Authority notes Infonas's agreement with its proposal. |

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The Authority's final decision

The Authority notes that the respondents have, in general, supported the Authority's approach. In this final Order it therefore maintains the approach set out in the draft Order, keeping the amendments to definitions in Schedule 8 of the Existing RO in Annex 3 (Special Conditions) of the ICLSA Service Description which Batelco is ordered to adopt.

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Q9. Do you agree with the proposed non-price terms set out by the Authority in Annex B of the draft Order? If not, please explain why and provide evidence to support your views, setting out why you think amendments to the proposed terms would more closely meet the requirements of the Law and the Determination.

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders' comments in relation to question 9. | |
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| Summary of stakeholders' submissions | The Authority's analysis and responses |
| <p>Batelco states that it does not object to any of the non-price terms set out in Annex 3 of the draft Order, except that, in its opinion:</p> <ul style="list-style-type: none"> - Clause 3.5 should be re-instated as, in Batelco's view, and for safety and security purposes, any Access Seeker must be escorted at all times while within an CLS. - Clause 6.3(b)(iii) should be re-instated as Batelco requires details on the type of service, the interface type, and the required capacity in order to ensure adequate service provision, speedy trouble-shooting, and the correct assignment of ports at the IC PoP. Finally, Batelco submits that it needs such information to match an Access Seeker's order to the submarine cable owner's ports. - Clauses 6.4, 6.6 and 6.7 (as related to service level parameters and rebates) should be removed or amended, as applicable. | <p>The Authority notes Batelco's position. It responds as follows to the particular matters raised:</p> <p>The Authority has noted Batelco's comment. It understands the importance of the CLS infrastructure and so reinstates, in this Batelco Order, an amended Clause 3.5 into the ICLSA Service Description.</p> <p>With regards to clause 6.3(b)(iii), the Authority is keen to ensure that the Access Seeker is not required to give Batelco more information about the type of service that it has purchased from the submarine cable owner than is necessary for Batelco to provide the ICLSA service. The information disclosure should be limited to that information that is absolutely vital to enable Batelco to provide the service. As such, the Authority has not reinstated clause 6.3(b)(iii).</p> <p>The Authority does not accept Batelco's position in this regard. Batelco should be subject to service levels and rebates for the performance of the services to the extent they are under Batelco's control. This is a necessary and a standard feature of all ROs, to ensure that Access Seekers are able to rely on the wholesale service they are acquiring.</p> |
| <p>In response to this question STC directs the Authority to its responses to previous questions and to its mark-up of the Service Description from the Draft Order.</p> | <p>Similarly, the Authority refers to its response to matters submitted by STC in the previous questions. The revised Service Description, reflecting the Authority's final position on the comments made by STC and other stakeholders, is attached as Annex B of this Order.</p> |
| <p>In its response, Zain raises a concern around the technical specification of the product. In particular, it highlights that according to the technical diagram</p> | <p>The Authority notes Zain's comments. The Authority has decided that it is appropriate to remove the equipment that Zain refers to. However, in relation to</p> |

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| <p>enclosed in the draft ICLSA Service Description, there is active Batelco equipment in the technical solution, and accordingly an accompanying passive ODF. It argues this equipment is unnecessary and should be excluded from the service description and hence its costs also excluded from the cost stack.</p> <p>If not amended, Zain believes this raises three concerns:</p> <p>It exposes the Access Seeker's traffic to a competitor. Zain argues that under the suggested technical topology, Batelco will have insight into the provisioned/active capacities and future expansions of the Access Seeker. This asymmetry of information will give them an advantage over other licensed operators jeopardizing the level playing field sought by the Authority.</p> <p>Having unnecessary equipment is technically inefficient and makes the ICLSA less reliable service.</p> <p>All duly licensed operators have the same security obligations as Batelco, including Lawful Access requirements, to comply with. Accordingly, the new additional equipment should not be justified for security related reasons.</p> <p>Therefore, Zain argues that the ICLSA must be limited to connect the SLTE directly to the Access Seeker's equipment with Batelco's passive ODF. Under Zain's solution, the Access Seeker would negotiate the capacity purchase directly with the Submarine Cable Owner. Batelco's involvement is then limited to the passive cross-connect (irrespective of the activated capacity) and hosting the Access Seeker's equipment (or BNet).</p> | <p>Zain's comment on the information that the Access Provider gains from the reference to the capacity in a wholesale order, the Authority is of the view that this information must form part of the service request given that the price of the service differs by capacity. This is further discussed in as part of the comments on price terms, in particular question 12.</p> <p>The Authority responds to the other points raised by Zain in this question in its response to the submissions received in respect of Question 12.</p> |
| <p>In its response, Nuetel summarises its proposed changes to the non-price terms.</p> <p>In addition, Nuetel also raises two further points:</p> <ol style="list-style-type: none"> 1. That Clause 6.5(b) [testing] should refer to paragraph 6 (d) whereas it refers to 6.4(a) 2. That Clause 7.4 (Termination) should be amended to increase the allowed period for the Access Seeker from 10 Business Days to 15 Business Days. This is due to the fact that, according to Nuetel, a third-party might be required to remove the equipment and it will take more time for agreement and coordination. Nuetel believes it | <p>The Authority notes that these are as previously set out by Nuetel in response to questions 3, 4, 6 and 7 and so are not repeated here. The Authority has noted Nuetel's additional comments. In this regard it replies as follows:</p> <p>The Authority confirms that, read in context, clause 6.4(a) is the correct reference in Clause 6.5(b).</p> <p>The Authority continues to believe that the 10 day period under clause 7.4 is sufficient. This is consistent with the remainder of Batelco's RO.</p> |

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| <p>is fair to arrange to switch off power within 5 Business Days.</p> | |
| <p>Infonas states that it agrees with the proposed non-price terms, subject to the following amendments:</p> <p>Target availability: Infonas proposes that this should be calculated on a monthly basis.</p> <p>Total Service Credit Cap: Infonas proposes that this should be removed.</p> <p>Termination Clause (7.1): Infonas proposes that this should be amended to reflect a one month notice period.</p> | <p>The Authority has noted Infonas’s comments on SLAs, and refers to its more detailed responses on that matter in Question 4.</p> <p>The Authority notes that Clause 14 of Schedule 9 of Batelco’s RO provides for either party to terminate a service, for convenience, on 30 days written notice. The Authority sees no reason that this should not also apply to the ICLSA service and so has amended this in the final Service Description to provide for a one month notice period after expiry of the initial term (which is consistent with there being a monthly rollover).</p> |

The Authority’s final decision

The Authority has considered carefully the comments it has received from stakeholders in response to this Question. Where appropriate, and as reflected by its responses set out above, the Authority has reflected these comments in the revised Service Description included in this final Order and which Batelco is required to adopt.

3 The proposed price terms

69. In this section, the Authority describes the price terms proposed by Batelco, the approach it has followed and inputs used in developing these price terms. The Authority further describes its approach to reviewing the price terms and the changes and revised price terms it has set out in this draft Order.
70. In conducting its review and developing these revised charges, the Authority had regard to Articles 57(b) and 57(e) of the Law, specifically as to the requirement they place on Batelco, as a dominant operator in a relevant market, to provide access to its network on terms that are fair, reasonable and non-discriminatory, and based on forward looking incremental costs.
71. The Authority has also had regard to the Determination, in which it recognised that it is important to ensure that the rate of return Batelco is allowed on its historic investment is sufficient to support future investment, whilst also supporting OLOs in their ability to offer a diverse range of resilient international connectivity services. The Authority considers that applying the principles set out in the Law (as referenced above) is consistent with this. This is because cost based access charges include a reasonable return on capital, based on the cost of capital previously determined by the Authority. Nevertheless, the Authority also recognises the critical nature of international infrastructure and the importance placed by the Government on such investment in the Kingdom. In determining appropriate price terms the Authority is therefore aware that it is important that Batelco's ability to undertake efficient investment in international capacity is not harmed. Deriving a specific cost of capital for the assets used in the provision of ICS is, however, challenging. Therefore, the Authority has taken what it considers to be a pragmatic approach to reviewing Batelco's proposed charges and ensuring the charges set out in this draft Order are fair, reasonable and non-discriminatory, typically erring on the side of caution when there is some uncertainty over individual cost items. Despite this, it is the case, however, for the reasons set out in the remaining parts of this section, that the Authority considers that revisions are required to the price terms proposed by Batelco.

3.1 Batelco's proposed price terms

72. The Authority understands that Batelco developed its pricing proposal based on an assessment of the capital and operating costs of the three relevant submarine cables and landing stations (FALCON, FOG and GBI) and the expected take-up of cross connect services. Its proposal contains three types of charges:
- a. Recurring hosting charges;
 - b. One off cross connect charges; and
 - c. Recurring cross connect charges.
10. Batelco priced the hosting service at BHD543 per month per rack. This was based on its estimate of the average of costs from all three landing stations. Its proposed cross connect

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charges vary according to the capacity offered to the Access Seeker. The charges Batelco proposed in its submission of 23 May 2021, by capacity, are set out in Table 1, below.⁷

Table 1: Batelco cross connect charge proposal

| Service capacity | One off charge (BHD) | Recurring charge (BHD per month) |
|-------------------------|-----------------------------|---|
| STM1 | 1,234 | 192 |
| STM4 | 1,234 | 561 |
| STM16 | 1,234 | 2,038 |
| 1Gbps | 1,005 | 863 |
| 10Gbps | 2,488 | 7,944 |
| 100Gbps | 63,102 | 78,824 |

Source: Batelco, GCL/79/21

11. These revised charges took into account some of Batelco's submissions in response to the Authority's RFIs and other TRA observations shared with Batelco during its review. So, to provide all Access Seekers with full transparency on the Authority's review, the Authority sets out, in the remainder of this section, all of the points of concerns it identified in Batelco's initial draft price terms. The Authority highlights where Batelco already responded, in its proposed charges of 23 May 2021, to a concern raised by the Authority.⁸
12. As set out in the preceding section, Batelco has drafted its proposed Service Description to make the hosting service a required part of the ICS. That is to say, that under Batelco's model, an Access Seeker is required to pay all three charges in order to obtain a cross connect to international capacity services on the three submarine cables.
13. For the reasons set out in the previous section, the Authority considers that this hosting charge should not be mandatory. Given the alternative options available to the Access Seeker for terminating at the CLS and the relative magnitude of the cross connect charges compared to hosting charges the Authority has focused its review, set out in the following sections, on the cross connect charges. The Authority then highlights where issues identified for the determination of cross connect charges also apply to the determination of hosting charges and hence its views on the appropriate level for these hosting charges.

3.2 Batelco's inputs to pricing the cross connect service

14. In supporting its proposed charges, Batelco provided a breakdown of the underlying costs of the cable landing stations and submarine cables subject to the remedy set out in the Determination. These can be split into three categories:
 - Capital expenses on assets related to cable landing stations and submarine cables;

⁷ The Authority notes that Batelco initially proposed a higher set of cross connect charges, before revising these in its submission of 23 May 2021.

⁸ In its discussions with Batelco the Authority focused on the input data used in the derivation of the proposed charges, rather than on the approach to calculating charges. As such, it has not, prior to the consultation, previously raised with Batelco all of the points set out in the draft Order.

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- Operating expenses related to maintaining these cable landing stations and submarine cables; and
- Mark-ups for overheads costs and profit margins.

15. The capital expenses for each submarine cable are set out in table 2.

Table 2: Batelco capital expenses inputs

| Cost element | Capital expenses (BHD) |
|------------------------------------|-------------------------------|
| FALCON | |
| Submarine Build & Equipment | [X] |
| FOG | |
| Building | [X] |
| Fronthaul ducting and transmission | [X] |
| Submarine Build | [X] |
| Submarine Equipment | [X] |
| Building | [X] |
| GBI | |
| Building | [X] |
| Ducting and Transmission | [X] |
| Ducting and Fiber | [X] |
| Submarine Build | [X] |
| Submarine Equipment | [X] |

Source: Batelco, GCL/79/21

16. The Authority noted in response to Batelco’s first submission that the level of detail provided by Batelco for each cable differed. It therefore requested further information from Batelco as part of its review (Ref. MCD/12/20/073). This information is further discussed in Section 3.4.1.
17. Batelco’s estimate of operating costs is based on applying a ratio of 10% to the depreciation costs calculated from the capital expenses outlined above. Un-attributed (i.e., overhead) costs were estimated by Batelco in a similar way, though this time through applying a ratio of 6.9% on depreciation charges and operating costs. This resulted in the operating expense estimates shown in Table 3, again split by submarine cable.

Table 3: Batelco operating expenses

| Submarine cable | Operating expenses (BHD per year) | Un-attributed / overhead costs (BHD per year) |
|------------------------|--|--|
| FALCON | [X] | [X] |
| FOG | [X] | [X] |
| GBI | [X] | [X] |

Source: Batelco, GCL/79/21

18. In addition to these costs, Batelco has also stated that it will incur other costs for additional active network equipment (not submarine cable related) that will be placed at the landing station between the point of terminating a national connection and the active submarine cable. Batelco has estimated these costs for a port of a specific capacity, with Batelco assuming that

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these costs would be incurred every time an access seeker wishes to cross connect. These costs, as estimated by Batelco, are set out in Table 4 below, with these consisting of capital and operating expenses. The Authority notes that in this case, there is no differentiation in these cost estimates by submarine cable.

Table 4: Batelco estimate of one-off costs

| Port capacity | Total costs (BHD per port) |
|---------------------|----------------------------|
| STM1 / STM4 / STM16 | [X] |
| 1Gbps | [X] |
| 10Gbps | [X] |
| 100Gbps | [X] |

Source: Batelco, GCL/79/21

3.3 Batelco’s approach to pricing the cross connect service

19. Based on its assumptions on capital and operating expenditures relevant to the ICS, Batelco implemented a number of steps to calculate an annual cost and, through applying an expected demand capacity, a cost per cross connect link at the different aforementioned capacities and for each submarine cable. To derive a single cross connect price, Batelco then derived a simple average from those unit costs and further applied a 20% profit margin to arrive at the prices set out in Table 1. The Authority describes these steps in more detail below, before turning, in the following section, to set out its views on Batelco’s approach and proposed tariffs.

3.3.1 The approach to calculating annual costs

20. In order to calculate annual costs, Batelco has converted the capital expenses set out in Table 3 into annual amounts. This is based on the following two steps:

- a. Calculation of annual depreciation charges; and
- b. Calculation of the cost of capital.

21. The annual depreciation charge was calculated using a linear depreciation approach. That is, Batelco divided the capital expenses by the number of years over which the assets are expected to be used (i.e., the useful life of the assets). The annual cost of capital charge was derived by applying the regulatory cost of capital of 9.5% to the capital expense, i.e. the gross book value of the assets.

22. Batelco then assumed that these annual costs would remain constant over the lifetime of these assets.

23. As set out above, operating expenses were then calculated as a ratio of depreciation charges, with overheads calculated as a ratio of direct operating expenses and depreciation charges. Summed together, all these items (depreciation charges, the cost of capital charge, direct operating expenses and overheads) then give the total annual costs included in Batelco’s proposed price terms.

3.3.2 The approach to calculate unit costs

24. To calculate unit costs, Batelco used historic capacities to derive forecasts of cross connect capacities on the three submarine cables. In so doing, it noted that growth rates derived from

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historic trends should, in its view, exclude unusual increases, namely from capacities provided to one large customer. The final capacities applied to the annualised costs of each submarine cable and the resulting unit costs presented by Batelco are set out in Table 5. This also includes an estimate of BHD[§] per STM1 for direct and common rack costs for housing the active equipment (other than submarine cable related equipment) at the landing station.

Table 5: Batelco capacity demand assumption and resulting unit costs

| Submarine cable | Capacity used for calculating unit costs (STM1s) | Unit cost (BHD / STM1 / month) |
|------------------------|---|---------------------------------------|
| FALCON | [§] | [§] |
| FOG | [§] | [§] |
| GBI | [§] | [§] |

Source: Batelco, GCL/79/21

25. Batelco then calculated unit costs for other capacities based on applying multiples of STM1s for other capacities.

3.3.3 The approach to calculate prices

26. From its submarine cable specific unit cost estimates, Batelco derived unit prices through:
- a. calculating simple averages from submarine cable specific estimates of unit costs estimates; and
 - b. applying a profit margin of 20%.
27. Applying these steps led Batelco to propose the recurring charges as set out in Table 1.

3.4 The Authority’s review of the inputs and approach used by Batelco to pricing the cross connect service

In this section, the Authority describes the changes (including those initially communicated to Batelco and partly reflected in the charges put forward by Batelco on May 23 2021 – as set out in Table 1) it believes should be applied to Batelco’s proposed price terms and why it believes the charges set out in this draft Order would more accurately reflect fair, reasonable and non-discriminatory price terms, based on the forward looking incremental costs that may be incurred by Batelco in providing these services. In so doing, the Authority first discusses the inputs used by Batelco to derive its proposed charges, then its approach to deriving unit costs and then, finally, its proposed pricing of the service.

3.4.1 The Authority’s review of Batelco’s costing inputs

28. At the launch of its review, the Authority raised a number of clarification questions in relation to the input assumptions made by Batelco (MCD/12/20/073). This is both because Batelco’s submission did not provide adequate information about the source of its inputs and because its inputs were not adequately described. Most of the Authority’s requests for clarification related to the capital expenses provided by Batelco for the FALCON and FOG submarine cables. Inputs on GBI were clear given that the Authority had previously ruled on access prices to the cable and the inputs provided by Batelco were the same as those considered by the Authority during those proceedings.

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29. Responding to the Authority's questions, Batelco submitted several records referring to the cost of deploying the FALCON and FOG submarine cables. It was evident from these records that the cost data submitted to the Authority in relation to those cables does not only refer to the cable landing station and submarine equipment and cable in the territorial waters of Bahrain but to the entire cable systems. The Authority does not consider that this is appropriate. This is because the regulated service covers only up to the territorial boundary of Bahrain. It is a clearly established regulatory principle that cost based charges for regulated network access services offered by a dominant network provider should only include those costs relevant to the service, alongside a fair proportion of fixed and common costs. Access Seekers will be able to agree commercial terms with Batelco, or other parties, for capacity on the cables beyond the territorial boundary. By also including those costs in the regulated service, an Access Seeker could find itself contributing twice to these costs.
30. The Authority has corrected for this following further discussions and submissions from Batelco. A record of the assets considered in the Authority in determining the draft charge terms set out in this draft Order is attached in Annex C.
31. These adjustments included a reduction in the value of the submarine cables considered relevant for the determination of the charges, with this being based on the ratio between the length of cables in Bahrain's territorial water and the total length of a cable. For this, the Authority has considered the distance of territorial water surrounding Bahrain of 12 Nautical miles, approximately 22km. While Batelco criticised that approach, noting that it considers the Authority's adjustment flawed (GCL/61/21), it was unable to provide an appropriate ratio, noting that it was unable to estimate the length of cable in the territorial waters (GCL/61/21). Also indeed, despite its criticism, the Authority notes that Batelco took this adjustment into account when submitting its revised charges on May 23 2021 as set out in Table 1.
32. The Authority has also considered further adjustments to the cost inputs initially provided by Batelco. Specifically, the Authority has excluded investment that had been replaced since the original investment in the submarine cable systems. For example, submarine cable equipment operating the FOG submarine cable had been replaced on two occasions to enable the cable to operate at higher capacities. While Batelco initially included all the capital expenses of the original investment as well as upgrades, the Authority considers that only the costs of the most recent upgrade are relevant. This is because the cost of previous equipment is likely to have already been written off / recovered. Again, Batelco had already reflected this in its revised charges set out in Table 1.
33. However, in addition to the above, the Authority has also excluded the costs of active equipment at the cable landing station from the FALCON and FOG capital expenditure schedules. This is because Batelco had already considered such equipment under separate cover (e.g. port costs considered as part of one-off charges proposed by Batelco). It has further excluded the cost of national backhaul connectivity to the GBI landing station.⁹ Given that all such national connectivity to the landing stations should now be operated by BNET, such costs should instead be recovered from BNET's reference offer charges.
34. Lastly, Batelco noted that the costs covered in the FALCON and FOG cost schedules did not include the cost of the cable landing stations. However, Batelco noted that it was unable to

⁹ The Authority notes that Batelco's proposed cost stack for the FOG and FALCON cables did not appear to include backhaul infrastructure in the same way as that for the GBI cable.

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provide such costs as a result of not having, in its possession, historic records in relation to those assets. The Authority has therefore considered the cost of the GBI landing station, which is known, as a proxy for the cost of the FALCON and FOG landing stations.

35. The adjusted capital expenses for each cable landing station, reflecting these additional adjustments made by the Authority, are set out in Table 6.
36. The Authority further notes that Batelco applied different asset life assumptions across the different submarine cables. The Authority has, therefore, adjusted those in line with the assumptions the Authority previously made in relation to the GBI case and which are consistent with its determination of appropriate charges in that case. The Authority notes that such lives are also more consistent with both the Authority's disaggregated breakdown of assets following the Authority's review of Batelco capital expense inputs and with the lifetimes of such assets according to Batelco's regulatory accounts. The asset lives applied by the Authority in determining the charges set out in this draft Order are also set out in Table 6.

Table 6: Batelco capital expenses inputs

| Cost element | Capital expenses (BHD) | Asset lifetime (Years) |
|------------------------------------|-------------------------------|-------------------------------|
| FALCON | | |
| Building | [X] | [X] |
| Fronthaul ducting and transmission | [X] | [X] |
| Submarine Build | [X] | [X] |
| Submarine Equipment | [X] | [X] |
| FOG | | |
| Building | [X] | [X] |
| Fronthaul ducting and transmission | [X] | [X] |
| Submarine Build | [X] | [X] |
| Submarine Equipment | [X] | [X] |
| GBI | | |
| Building | [X] | [X] |
| Fronthaul ducting and transmission | [X] | [X] |
| Submarine Build | [X] | [X] |
| Submarine Equipment | [X] | [X] |

Source: TRA based on Batelco

37. The Authority has also made further adjustments to the operating expenses considered by Batelco. In relation to GBI, the Authority notes that Batelco receives an annual contribution from GBI (owner of the international GBI submarine cable) for the operation and maintenance of the cable landing station. The Authority has therefore excluded any additional operating expenditures in relation to this landing station. In relation to FALCON, the Authority understands that Batelco operates with a similar agreement, whereby the station and equipment is operated / maintained by GCX staff (the owner of the international FALCON cable). It has therefore excluded any operating expenses in relation to this cable landing station.

3.4.2 The Authority’s review of Batelco’s costing approach

38. Having reviewed Batelco’s approach as described in Section 3.3, the Authority considers that it contains two flaws:
- a. Capital cost: Batelco’s approach derives capital costs by applying the WACC to the gross book value of the relevant assets. This approach overestimates costs as the asset value declines over the lifetime of the assets. Instead of Batelco’s approach of calculating depreciation and capital cost separately, the Authority calculates depreciation and the annual capital charge as a combined annuity. That is, the Authority calculates an equal annual amount which, over the lifetime of the asset, enables Batelco to recoup the cost of the investment in that asset. The same approach was used for revising the annual capital charges included in the costs underlying Batelco’s proposed hosting charges.
 - b. One off costs: Batelco proposed to recover the costs of connecting an Access Seeker at the landing station through a one off charge. This included a port cost for connections to active equipment at the landing station between the Domestic Point of Handover and the International Access ODF. However, the Authority considers that such equipment is an asset depreciating over a period of time (the Authority assumes 10 years, in line with other active equipment) that can be reused in the event that an Access Seeker terminates its cross connect service. The Authority has, therefore, included these costs in the cost stack for estimating monthly recurring charges, using the same approach of cost annualisation described in the preceding paragraph (a). This means that the only remaining one-off costs are those that are related to the labour required for connecting the relevant equipment between the point of handover and the SLTE, upon setup of a new ICLSC service. Such costs do not vary according to the bandwidth of the ICLSC service.
39. Having corrected the flaws described above, the Authority’s revised annualised costs estimates are shown in Table 7.

Table 7: Revised annualised costs (Capex, Opex and overheads)

| Cost element | Total annual costs (BHD) |
|------------------------------------|---------------------------------|
| FALCON | |
| Building | [X] |
| Fronthaul ducting and transmission | [X] |
| Submarine Build | [X] |
| Submarine Equipment | [X] |
| FOG | |
| Building | [X] |
| Fronthaul ducting and transmission | [X] |
| Submarine Build | [X] |
| Submarine Equipment | [X] |
| GBI | |
| Building | [X] |
| Fronthaul ducting and transmission | [X] |
| Submarine Build | [X] |
| Submarine Equipment | [X] |

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| Port costs | |
|-------------------|-----|
| STM1/4/16 | [X] |
| 1 Gbps | [X] |
| 10 Gbps | [X] |
| 100 Gbps | [X] |

Source: TRA based on Batelco

3.4.3 The Authority’s review of Batelco’s approach to calculate unit costs and prices

40. In line with Batelco’s approach, the Authority calculates unit costs by dividing annual costs with an estimate of demand for the period 2021 to 2023. Following the Authority’s clarification questions regarding the inclusion of capacities in relation to one large customer in Batelco’s forecast, Batelco noted that these capacities were missing from the forecast and so provided revised capacity estimates. These estimates were based, according to Batelco, on previous assumptions made by the Authority. These adjustments to capacity volumes and growth were already reflected in Batelco revised charges set out in Table 1. The Authority has, however, revised these estimates downwards to reflect slower actual capacity growth in the data Batelco submitted. The average volumes for the period 2021 to 2023 assumed by the Authority and hence used in determining the price terms in this draft Order are set out in Table 8 below.

Table 8: Revised demand assumptions

| Submarine cable | Capacity used for calculating unit costs (STM1s) |
|------------------------|---|
| FALCON | [X] |
| FOG | [X] |
| GBI | [X] |

Source: TRA based on Batelco

41. As set out above, Batelco then calculates an average cost / price across all three submarine cables. The Authority agrees with calculating such an average. This is because the services offered on each cable, such as destinations or type of connections, are broadly similar and calculating a price by submarine cable (which would differ significantly) could further embed the imbalance in the usage of the different cables which has historically been brought about through the lack of effective competition in the relevant markets.
42. However, contrary to Batelco’s approach, the Authority does not estimate unit costs as a simple average of unit costs by submarine cable. Instead, the Authority estimates a weighted average across all submarine cables. This is because a simple average would result in costs being over-recovered.¹⁰ This adjustment of the costing approach results in a significant reduction of the unit costs on which the proposed charges are based (approximately 60% of the change in costs underlying the recurring charges). Therefore, the Authority is specifically interested in stakeholders views about this aspect of the costing approach.

¹⁰ This is because higher unit costs (by submarine cable) are the result of one submarine cable carrying lower traffic volumes. A simple average applies more weight to the unit cost derived from the costs and volumes of that cable. A price based on this average will result in Batelco earning more revenues than are needed to recover the costs from all the domestic portion of all three submarine cables and landing stations.

Q10. Do you agree with the approach to calculate a weighted average unit cost across all the cable landing stations as a basis for setting recurring cross connect charges?

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders' comments in relation to question 10. | |
|---|--|
| Summary of stakeholders' submissions | The Authority's analysis and response |
| <p>In its response, Batelco acknowledges the explicit reference made by the Authority in the consultation to the importance placed by Government on investment in international capacity infrastructure.</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>Batelco then comments on specific aspects of the approach the Authority took to determining price terms in the draft Order:</p> | <p>The Authority is confident that its proposed price terms provide a reasonable balance between promoting investment and competition over the dominant party's infrastructure. [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> |
| <p>1. The Authority's estimate of once-off costs is based on an assumption that the ports that connect to active equipment have an asset life of 10 years. In Batelco's view, the Authority should set the time period for the depreciation of ports that connect to active equipment at 1 year instead of 10 years, as demand for that equipment will not be uninterrupted, as it is unlikely a new Access Seeker would immediately replace an Access Seeker who had terminated service. Furthermore, Batelco argues that it does not have any clear or definite forecast of future market growth for the ICLSA service, meaning that removing the cost of the port from one-off costs would impact its ability to recover its investment.</p> | <p>The Authority considers that the equipment in question is not unique to the ICLSA service and can be used for connecting any other access seeker or Batelco, either at the CLS or elsewhere in Batelco's network, should an access seeker terminate an ICLSA service after less than 10 years. It would therefore, in the Authority's view, not be appropriate to consider the cost of that equipment as a one off. Rather, should that equipment be required for this service (see response to comments received in relation to Question 12 below) that cost should be recovered over the useful life of the equipment. This would be consistent with how the Authority has catered for the recovery of physical asset costs in determining other regulated access charges, both for Batelco and BNet.</p> |
| <p>2. Costs should be set using simple averages, [REDACTED] rather than weighted averages. [REDACTED].</p> | <p>In relation to prices being based on weighted averages, Batelco's response fails to set out how the Authority's approach would lead to [REDACTED]</p> <p>[REDACTED] an under-recovery of costs. In the consultation, the Authority has mathematically shown why using a weighted average of the cable specific unit costs results in the full</p> |

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recovery of costs. Batelco has not questioned this and has not demonstrated how the use of the weighted average could result in an under-recovery of costs or how the use of the simple average would not prevent it from over-recovering its costs. As such, the Authority does not believe it is necessary to change its approach in this regard.

[§].

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3. [REDACTED].

[REDACTED].

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| <p>4. [X].</p> | <p>[X].</p> |
| <p>STC generally agrees with the approach taken by the Authority but lists a number of issues it considers not fully addressed by the consultation on the draft Order.</p> <p>1. A detailed explanation of the ratios applied in the estimation of operating and unattributed costs would be welcomed. There is no justification for the method used to estimate operating costs and unattributed costs and in particular the ratios applied to derive them from depreciation and depreciation and operating costs respectively. STC has searched for justifications for the method in consultations related to previous Batelco ROs:</p> <p>a. There was no justification, and indeed no mention in the 2019 consultation.</p> <p>b. The 2011 consultation refers to unattributed costs but does not provide a method for deriving them. Section 3.3 Cost Allocation in the Regulatory Accounting Regulation Consultation Document notes that <i>“un-attributable costs would be allocated through the use of an equi-proportionate mark-up ... in proportion to the sum of ... direct and indirect costs that have been allocated to the individual Product or Product Group.”</i> The paper notes that (like the Accounting Separation Regulation 2004 as amended) the costs should be less than 10% of the overall costs in a Relevant Market but does not determine the precise ratio.</p> <p>c. In the TRA’s Final Order on Batelco’s Reference Offer dated 18 August 2016, maintenance is shown to be 10% of capital and it suggests that this is the only direct or indirect operating cost considered.</p> <p>2. According to STC, it is not clear what is meant, in para 66 of the consultation, by</p> | <p>The Authority notes STC’s general agreement with its approach. In response to the specific comments then raised by STC, the Authority responds as follows.</p> <p>The Authority notes that specific cost information provided by Batelco is subject to confidentiality. In relation to the inclusion of such costs, the Authority notes that the presence of direct operating expenses and overhead costs should come as no surprise to STC. It is common TRA and regulatory practice to consider such costs in the determination of cost oriented prices. The fact that such costs had not been explicitly included in the past, does not imply that they had not been considered. In the 2019 determination the Authority was satisfied that the prices determined would enable Batelco to recover efficiently incurred costs.</p> <p>In relation to the approach, the Authority believes that the use of ratios is common practice and consistent with the references that STC quotes, i.e. an equi-proportionate mark-up is a constant ratio applied to the direct cost of services. An operating cost mark-up is also typically applied to a base from which a reliable relationship can be derived, in this case, annual statutory depreciation charges. This is akin to the approach used in the 2016 Batelco ROO.</p> <p>In relation to the ratios used, the Authority is satisfied that the ratios are within the range of evidence available to the Authority, notably from Batelco’s regulatory accounts.</p> <p>The Authority would like to clarify that the depreciation amounts, from which operating and unattributable</p> |

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| <p>“depreciation” when deriving operating costs and unattributed costs. The Authority determines in para 87 that an annuity value is to be used instead of Gross Book Value x WACC + Depreciation as Batelco proposed in determining annualised capital costs. From this, STC believes it is not clear whether the Authority intends to continue to factor operating costs and unattributed costs from depreciation by applying ratios, or whether it is replacing the depreciation value with the annuity value in these calculations. If the latter, it would mean that operating costs and unattributed costs would be inflated by the inclusion of the cost of capital.</p> | <p>costs are estimated, are calculated assuming linear depreciation. This depreciation amount is, however, then not used in the annualised cost of the asset, for which the annuity approach is instead used.</p> |
| <p>3. According to STC, it is not apparent how the OPEX of GBI and FALCON CLS have been excluded, as stated in paragraph 86, when OPEX have been determined by applying a ratio to depreciation, as specified in paragraph 66 of the consultation document.</p> | <p>Mark-ups for operating expenses had been excluded from the GBI and FALCON cost stacks on the grounds that international submarine cable operators contributed to the running costs of the CLS. For the avoidance of doubt, the Authority notes that the linear depreciation is only used for the purpose of applying the ratio. For the purpose of deriving the annualised cost of an asset, the annuity approach is used.</p> |
| <p>4. STC believes that the basis for the Authority’s revision to its estimates of capacity growth is not clear.</p> | <p>The Authority notes STC’s comment. To clarify, the Authority took as a basis of its forecast, the current capacity carried through the relevant CLS. It then took the historic trend of capacity growth on those cables, but excluded from this the capacity growth which has arisen from serving one large customer. The Authority then forecasts the capacity for 2021, 2022 and 2023 applying that growth trend to the 2020 capacity level (i.e. including that large customer). It then used the average capacity from those three years as a basis for calculating unit cost.</p> |
| <p>5. According to STC, using the cost of the GBI CLS as a proxy for the FALCON and FOG CLS results in over stating costs. This is because the GBI CLS is a separate stand-alone building, whereas the FOG and FALCON CLS are incorporated on a floor in an existing Batelco structure. STC notes the capital costs of constructing those cable landing stations would have been recovered through historic operation and maintenance fees. STC also proposes costs for the relocation of the GBI CLS should not apply to the FOG and FALCON CLSs (which to STC’s knowledge have not been re-located).</p> | <p>The Authority considers that the GBI costs can be used as a proxy. While FOG and FALCON CLS are placed in larger buildings, their costs may not be fundamentally lower given the construction and fitout of those larger buildings can be relatively more expensive than a purpose built structure for a standalone CLS.</p> |

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| <p>Zain submits the following comments in relation to Question 10:</p> <ol style="list-style-type: none">1. Addressing the IC solution via a single regulated product for all existing international submarine cable is inadequate, because the different investment models significantly affect the cost structure. As Batelco is part of the FOG consortium and just the landing party for FALCON and GBI, calculating a weighted average unit cost across all CLS could, in Zain's view, inflate the ICLSA charges. It believes FOG should be removed from the ICLSA product and any associated costs disregarded. Including FOG in the ICLSA is not meaningful in practice because Batelco holds co-ownership of the cable, and thus, licensed operators are only able to purchase capacity from Batelco and not from other members of the consortium. The ICLSA product is intended to enable operators to directly purchase capacity from the cable owner and not through the landing party (Batelco) at more competitive rates whereas in the case of FOG the cable owner and the landing party is the same party. Given this, Zain argues that there is no benefit to including FOG in the ICLSA service. 2. Zain describes two types of service models in the wider IC market; 1) shared ownership cables (where capacity either may only be purchased from the owner/ operator in that country, or where capacity in any given country along the route may be sold by any of the owners of that cable) and 2) privately owned cables with a landing party in each country, with those landing parties entering into agreements to use capacity on those cables. Zain argues (as set out in its first comment) that cables such as the FOG cable, which fall into the first category and where capacity must be purchased by Batelco, should be excluded from this regulation, with the following remedies applied to all other cables<ol style="list-style-type: none">a. a colocation product set in accordance with the approved reference offer for that operator.b. a passive, regulated cost-based cross-connect product, as per the IFC service under Batelco's RO.c. the implementation of a clear open access model with a passive cost-based cross | <p>The Authority disagrees with Zain's standpoint. The ICLSA is meant to remove the bottleneck of access to international connectivity that exists as a result of Batelco being dominant in that market. This bottleneck exists regardless of the investment model used for the rollout of a submarine cable. The remedy is therefore to remove the bottleneck in all submarine cables that the dominant operator controls / owns. Under the current licensing regime, for the cable owner to lay its telecommunications network in the Kingdom of Bahrain and/or to sell capacity directly to licensed operators in the Kingdom it would need to acquire the appropriate Telecommunications Licence.</p> <p>For the reasons set out above, the Authority does not agree with treating differently the separate CLS of the dominant party, based on differences in the ownership of international connectivity assets.</p> <p>With regard to the price terms referenced by Zain, the Authority notes that it is the purpose of this Order to determine appropriate price terms for the ICLSA service, with those being based on the assets utilised in the provisions of those services.</p> |
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connect, to ensure that Bahraini operators are able to meet the minimum capacity purchase requirements of any cable owner by signing multiple CPAs. According to Zain, this will enable all ISL and IFL holders to collectively shoulder the minimum capacity purchase requirement to expand international capacity to Bahrain.

3. Access to the TATA cable warrants a more detailed review by the Authority, to maximise the outcome of the intended regulated product.

The Authority notes Zain's comment. However, it reminds Zain that the scope of the remedy must be consistent with the defined market and the finding of dominance, as set out in the Determination. As such, it is neither possible, nor appropriate, to extend the remedy to the TATA cable.

4. Zain is concerned with using the cost of the GBI CLS as a proxy for the FALCON and FOG CLSs. Zain assumes that, as per international best practise, GBI not Batelco would have paid for the construction of the GBI landing station, which is not a dedicated landing station but part of a full exchange. FALCON and FOG landing stations are spaces within existing Batelco buildings, therefore costs recovered should be proportionate to any additional work carried out by Batelco to accommodate these landing stations, if any, and Batelco should only be allowed to recover any efficiently incurred costs

The Authority is satisfied that the costs provided in relation to GBI are those of a standalone landing station and that this provides a reasonable proxy for other cable landing stations. While FALCON and FOG landing stations are placed in a larger building, the shared costs may not necessarily be different from those of a standalone building. This is because, an ability to share a building may result in relatively lower costs all else equal but a larger building may also incur higher costs of construction, fitout and operation, hence increasing the costs attributed to individual functions provided in that building. The Authority also notes that the basis of its approach is the use of replacement costs and it cannot be guaranteed that future landing stations will be shared with other network functions.

5. In the case of GBI and FALCON, the cost of connecting to Bahrain has been fully borne by the submarine cable owner. Hence Zain is concerned with the Authority's approach of using the distance of Bahrain's territorial water in calculating the relevant portion of the cost of the SC that Batelco should recover.

The Authority accepts that the cost Batelco has actually incurred may differ from those reflected in the cost stack used to determine the price terms in the Order. However, the Authority considers that its approach, which is based on replacement costs, is fair and reasonable. The Authority considers it necessary to promote further investment into international connectivity and it notes that basing charges only on historic costs, rather than forward looking replacement costs, may not sufficiently support this. In contrast, an approach based on replacement cost provides incentives to invest for the incumbent and access seekers alike. Furthermore, an approach that would limit the extent to which the national cost of submarine cable infrastructure is taken into account, on the presumption that an international cable operator would pay for such equipment/infrastructure, could also foreclose certain models of rollout.

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| <p>Nuetel believes the inclusion of the costs of the FOG cable in a weighted average charge is inappropriate. This is because this cable is reaching the end of its useful life and Nuetel assumes (in the absence of having detailed cost information) that including the “<i>full cost of FOG</i>” could increase the overall average charge.</p> | <p>The Authority has set out, above, its reasons for including the FOG cable in the remedy and hence in the cost stack when determining price terms. The Authority does not consider the age of the FOG cable to be relevant in this regard.</p> |
| <p>Infonas does not “<i>completely agree</i>” with the Authority’s approach. Specifically, it notes that:</p> <ol style="list-style-type: none"> 1. CAPEX should be considered to have already been recovered given Batelco’s “<i>past period of dominancy</i>” and from consortium agreements. 2. Markups for overhead costs and profit margins should be excluded. 3. Asset lives used in the determination of the charges should be expressly specified. 4. Growth rates for service volumes should include growth from OLOs, not just from Batelco historical trends. 5. The approach should consider the sales forecast over the lifetime of the network for at least 5 years. 6. That when calculating unit cost, a minimum 5 year estimate of demand should be used, to be reviewed after one or two years. | <p>The Authority notes that the principles for setting regulated prices are prescribed by Art 57 of the Law and are based on cost recovery and not on revenue recovery. Historic revenues earned over the relevant assets should not, therefore, affect cost oriented charges determined today.</p> <p>The Authority agrees with Infonas that explicit profit margins should be excluded and notes that the Authority has removed any profit margins (in excess of WACC) that Batelco initially included in its proposed price terms. The Authority does not agree with removing a mark-up for overhead costs because those costs are incurred and Batelco should be allowed to recover those costs.</p> <p>The asset lives were expressly specified although due to confidentiality not made available in the public version of the consultation document.</p> <p>The traffic on which growth rates are based includes OLO traffic. However, the Authority agrees with Infonas that further growth in demand is possible over the following years, following the introduction of the ICLSA service, with this representing a potential upside for Batelco. However, given uncertainty about that growth, the Authority does not consider it appropriate to include such an assumption at this stage. It will, however, continue to monitor the development of the market, including the take-up of the service, and review the price terms, should it have reason to believe they no longer sufficiently reflect the costs of the service.</p> |

The Authority's final decision

Having considered the responses from all stakeholders, the Authority continues to believe it is appropriate to calculate the ICLSA charges based on a weighted average of the costs of the three submarine cables: FALCON, FOG and GBI. The Authority's final decisions in relation to aspects discussed in the comments above other than the averaging of unit costs are set out later.

Content of the Consultation document in relation to Question 11

43. The Authority further discards the excess profit margin added by Batelco. The Law requires that access charges set by a dominant provider are fair, reasonable and non-discriminatory, and based on forward looking incremental costs. While this can include a reasonable return on capital (i.e., "profit") for investors, this is already reflected in the WACC applied when calculating annualised capital costs. However, as set out in the introduction to this section, the Authority has been cautious in its approach to adjusting the costs proposed by Batelco. That is, Batelco had included an additional mark-up for unforeseen expenses as a mark-up of 20% on total annual and one-off costs. The Authority has considered this mark-up also having regard to similar adjustments made by the Authority in past Reference Offer Orders applying to Batelco¹¹ and BNet¹². In particular, the Authority is mindful of:
- a. additional costs that Batelco may incur in setting up and managing the cross connect service at the FOG cable landing station (recognising that cross connect services had already been established at the GBI and FALCON cable landing station);
 - b. Additional costs that Batelco may incur in adapting its current wholesale processes for the cross connect services at the GBI and FALCON landing stations to align with those set out in its RO; and
 - c. The uncertainty with regard to the take-up of the cross connect service and the cost of dealing with this wholesale demand.
44. The Authority has yet to determine whether the uncertainties in relation to this cross connect service are smaller compared to previous occasions when the Authority has included a mark-up for unexpected costs. As such, the Authority wished to consult on whether this mark-up remained justified.

Q11. Do you agree with including a mark-up of 20% on costs to account for unexpected costs in the rollout of the ICLSA service?

¹¹ MCD/08/16/066

¹² LAD 0619 178

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders' comments in relation to question 11. | |
|---|---|
| Summary of stakeholders' submissions | The Authority's analysis and response |
| <p>Batelco believes that a 20% markup is necessary to mitigate additional costs that may arise during implementation of the decision. It argues this is standard practice.</p> | <p>The Authority notes Batelco's comments.. However, the Authority notes such a mark-up should only be included where there is significant uncertainty in the unit costs that the Access Provider may face when offering the RO service, such that these uncertainties cannot reasonably be reflected through other parameters of the charge. As set out below in its response to comments made by other parties, the Authority accepts that the total costs Batelco is likely to incur in providing the ICLSA service are unlikely to exhibit significant uncertainty. However, the Authority does note that there could be reasons why the level of unit costs could exhibit such uncertainty. For this reason, the Authority has maintained, in the final Order, the 20% mark-up.</p> |
| <p>STC notes that its comments in relation to this, question are made on the basis of the descriptions of the calculations provided in the consultation noting that it was unable to reference actual values, given that those were redacted for confidentiality reasons.</p> <p>STC outlines three types of risks the authorities uses to justify the inclusion of markup:</p> <ul style="list-style-type: none"> a) Additional costs that may be incurred in setting up and managing the FOG cross connect service (cross connect services for FALCON and GBI have already been established) b) Additional costs that may be incurred by Batelco adapting its current wholesale processes for cross connect services to the RO c) Uncertainty in regard to take-up of the cross connect service and cost of dealing with demand. <p>STC notes that costs under (a) would be negligible given the services have already been established at the FALCON CLS, which is in close proximity to the FOG CLS. Hence infrastructure and facilities management have already been established and it is reasonable, according to STC, to expect that additional equipment and ancillary services already exist. STC notes the use of a 20% margin in previous pricing decisions by the TRA in 2016</p> | <p>The Authority agrees with STC' that there are likely to be limited uncertainties in the costs that Batelco may incur as a result of the introduction of the ICLSA service. However, despite this there could be significant uncertainty in the level of unit costs, as a result of the "lumpy" nature of demand for international connectivity. Specifically, there may be circumstances under which the volume of services sold over the relevant cables falls significantly (for example, as a result of new investment). A reduction in volume would result in increasing unit costs. The level of the reduction that Batelco could face and the corresponding increase in unit costs would be more extensive than what could be considered normal variations in demand (in the context of risks associated in the determination of the WACC) and the Authority is therefore of the view that the 20% mark-up is justified to compensate Batelco for that risk.</p> |

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| <p>were based on more numerous and substantiated uncertainties.</p> <p>In respect of (b), STC believes that the changes from existing services to the new service appear to be marginal.</p> <p>With respect to (c), STC argues that this risk is already mitigated through the WACC which provides for Batelco to make a return on its employed capital under assumed capacity growth forecasts. STC argues that the Authority has also revised down growth forecasts, with a resultant increase in unit costs and hence prices, thereby protecting Batelco to some extent from uncertainty in take up of the cross connect service. STC therefore believes, in the absence of solid evidence of modification, adaptation or additional new service costs, that these cited uncertainties are speculative and considers that the proposed price terms are too high. Specifically, STC argues the price terms are up to 17% too high.</p> <p>STC notes in this context that the Authority should consider the likely level of recovery of existing costs, given the amounts charged previously for international cross connection as well as Batelco being able to charge O&M as an international cable landing station operator. STC further notes the existing cost base has been boosted by the use of historic costs in the calculation of the proposed charges, given falling unit costs for communications hardware and software and submarine cable infrastructure over time.</p> | <p>The Authority notes that STC has not detailed the basis for its estimate that price terms are up to 17% too high. The Authority, on the contrary, considers that the price terms in the Final Order reflect the requirements of Article 57, while also providing sufficient incentives for investment to all parties.</p> <p>As set out elsewhere in this final Order, the Authority has considered replacement costs provide a sound basis for determining the price terms in the final ROO.</p> |
| <p>Zain disagrees with any markup.</p> <p>In its opinion, the technical topology is straightforward and the level of uncertainty, which is used to justify the markup's inclusion, is null to negligible.</p> <p>Zain additionally believes that most of the operational cost, and any upgrade cost, is fully covered by the submarine cable owner, not the landing party, and the landing party has no commitments in this regard.</p> | <p>The Authority notes Zain's comments. As set out above in response to STC's comments, the Authority has considered a number of aspects in relation to this mark-up and concluded that on balance, the mark-up is justified.</p> |
| <p>Nuetel believes the 20% mark-up is unjustified and suggested prices should be lower because, in the case of FALCON and GBI, the submarine cable system owners made the majority of investment and pay Batelco an annual amount for operation</p> | <p>The Authority notes Nuetel's comment.</p> <p>The reasons for including the mark-up in the final determination of prices are set out above.</p> |

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| and maintenance. Nuetel also believes Batelco has already recovered its investment costs by providing end to end services over the cables. | The Authority replies to Nuetel's other points in its response to comments made on the subsequent questions. |
| Infonias disagrees with the inclusion of the markup and requests additional information and clarification on the criteria for including this. | The Authority notes Infonias's comment. The reasons for including the mark-up in the final determination of prices are set out above. |

The Authority's final decision

Having considered the positions of all stakeholders and, in particular, having considered the extent to which the costs Batelco incurs in providing the ICLSA service and the volumes through which those costs are recovered are uncertain, the Authority has decided to continue to apply the 20% mark-up in the final cost stack used to determine the charges included in this Order.

Content of the Consultation document in relation to Question 12

45. The Authority has had regard to the requirements set out in the Determination and, in particular, the requirement to distinguish between active and passive cross connect charges. As such, the Authority has split out, from Batelco's proposed charges, those cost items which are incurred on a per link basis, so that these can be recovered from a separate charge. This includes the costs for passive cabling and rack space at the cable landing station.

Table 9: Revised cross connect charges

| Service capacity | One off charge (BHD) | Passive cross connect charge (BHD per month) | Active cross connect charge (BHD per month) |
|-------------------------|-----------------------------|---|--|
| STM1 | 226 | 41 | 38 |
| STM4 | 226 | 41 | 117 |
| STM16 | 226 | 41 | 429 |
| 1Gbps | 226 | 41 | 178 |
| 10Gbps | 226 | 41 | 1,696 |
| 100Gbps | 226 | 41 | 17,457 |

Source: TRA based on Batelco

46. Having compared the charges for hosting services against similar services available from BNET, (Co-mingling and dedicated rack facility services)¹³ the Authority considers that the cost base put forward by Batelco is justified. Correcting for the error in calculating annualised capital expenses as set out in paragraph 38 results in a revised charge of BHD 496 per rack per

¹³ LAD 0619 178

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month. The Authority thus intends to require Batelco to amend its proposed hosting charge to BHD 496 per rack per month.

Q12. Do you agree with the proposed price terms set out by the Authority in the draft Order, including the basis on which these have been derived? If not, please explain why and provide evidence to support your views, setting out why you think amendments to the proposed terms would more closely meet the requirements of the Law and the Determination.

Summary and assessment of consultation responses

| In this table, the Authority provides a summary of and a response to stakeholders' comments in relation to question 12. | |
|---|---|
| Summary of stakeholders' submissions | The Authority's analysis and responses |
| <p>Batelco disagrees with the proposed price terms in the Order and makes the following specific comments:</p> <ol style="list-style-type: none"> 1. The cost of domestic infrastructure (i.e., before the international boundary) were clearly identifiable and so should not be reduced according to the ratio of the length of cables in Bahrain's territorial waters and the total length of the cable. 2. Despite it having provided the Authority with the total cost of network elements attributable to Bahraini territorial water for the FALCON cable, the Authority has significantly reduced those costs. Instead, Batelco believes that the Authority could have taken the existing GBI costing as a benchmark for the FALCON cable, consistent with its approach to other elements of the draft Order. 3. The exclusion of the cost of active equipment at the CLS from the FALCON and FOG CAPEX schedule should be reconsidered. Batelco again stresses the importance of such equipment [X]. | <p>[X] Batelco confirmed to the Authority that certain cost items (as contained in the asset schedule provided in relation to the FOG and FALCON cables) relate to the entirety of links between Bahrain and other jurisdictions (such as Qatar) and that Batelco was unable to identify the precise share of the cable located in domestic territory. Given this, the Authority applied the approach set out in the draft Order. In responding to this consultation, Batelco has not provided any alternative cost data which would allow the Authority to move away from this approach.</p> <p>Again, the Authority is unaware of the specific costs that Batelco refers to and for the reasons set out in the preceding paragraph, does not believe it has reason to move away from the approach in the draft Order. The Authority is satisfied that its approach to estimate the costs of the domestic part of the FALCON cable is better suited than a proxy based on GBI. This is because the Authority's approach relies on the actual costs of the FALCON cable, rather than the costs of another cable. The Authority has only used GBI as a proxy where information on such costs is not available.</p> <p>Having considered the views of all the parties, (especially those made by STC in response to Question 1 and Zain in response the Question 9) the Authority has concluded that the ICLSA service does not require Batelco to place additional active equipment at the CLS, other than monitoring and SLTE equipment for the submarine cable itself.</p> |

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4. The cost of national backhaul for GBI should be included in price terms. In this regard, Batelco notes the cost of national backhaul has been excluded by the Authority under the

The Authority has considered carefully Batelco's arguments in this regard. [REDACTED] Batelco refers to three reasons why active equipment is needed:

- a) Ability to detect faults
- b) Monitor the compliance of access seekers with the contractual capacities acquired
- c) Ensuring Batelco's compliance with TRA monitoring and other legal requirements imposed by competent Authorities in Bahrain, such as in relation to lawful interception.

In relation to a), the Authority is of the view that Batelco, as the owner of the domestic submarine equipment and infrastructure must be able to exercise such fault detection through that equipment, or if it has rendered control of the assets to another party, ensure that such detection and any actions for fault recovery are contractually secured with that party.

In relation to b), the Authority is of the view that actual or contractual control of the SLTE should enable Batelco to monitor the compliance of access seekers in relation to the capacity acquired from Batelco.

In relation to c), the Authority notes that it is not for Batelco to specify the equipment that is required for the purposes of lawful intercept. Rather, Art.78 of the Law provides that a Licensee is required to provide technical resources to allow access to its network "giving regard to technical development and in accordance with the provisions of the regulations and decisions issued by the Authority" (Emphasis added by the Authority). Of the other articles of the Law quoted by Batelco, Article 53 relates to the Authority's powers to request information from licensees and Article 77 to granting access to the Authority's staff to telecommunications equipment / facilities.

Having considered the exclusion of active equipment between the national and international ODFs, the Authority has also reviewed several other elements of equipment associated with the SLTE (for example SDH and monitoring equipment) which it had previously excluded from the cost stack as a result of Batelco proposing the inclusion of active equipment between the ODFs. Given the Authority's decision to exclude the cost of active equipment between the ODFs, it considers it is justified to reinstate, in the cost stack the cost of this equipment associated with the SLTE.

The Authority notes that the transfer of relevant assets from Batelco to BNet, following the establishment of BNet as a legally separate entity, had not taken place at the time the [REDACTED] decision was made. In its

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| <p>assumption that such costs are now part of BNet’s product offering. Batelco notes, in contrast, that the Authority considered, in the 2019 [redacted] Decision, duct and fibre investment as attributable to the cost of the GBI cable, with this being reflected in the 2019 price terms. Batelco considers that this discrepancy is unfair and that such costs should be reflected in the price terms under the Draft Order. [redacted].</p> | <p>submission, Batelco recognises now that the BNet PoP will be located at the cable landing station. In line with this and the provisions of the BNet Licence, the national connectivity to the landing station can, going forward, only be provided by BNet.</p> |
| <p>5. [redacted].</p> | <p>[redacted].</p> |
| <p>6. Depreciation should be calculated based on a straight line method, in line with Batelco’s records and its regulatory and statutory accounts.</p> | <p>The Authority disagrees with Batelco’s proposal. The Authority’s approach ensures that an equal amount of costs, consisting of depreciation and cost of capital is recognised in each year. This is consistent with the Authority’s approach on other occasions, such as the [redacted] Decision, while the Authority’s use of an annuity model also mirrors similar approaches typically used in bottom up cost models. The Authority notes that Batelco’s approach, as initially articulated in its proposed charges, would result in an over recovery of costs, while even if this was corrected (by applying the cost of capital to the net book value of assets, rather than the gross value) it would still result in a declining capital cost each year. In contrast, in setting price terms for a number of years, the Authority considers that it is important to set stable price terms.</p> |
| <p>7. The assumptions and methodology used to revise Batelco’s estimated capacity volumes and growth are, in Batelco’s view, unclear. Batelco asks the Authority to clarify its assumptions and approach, while noting that it considers the Authority’s forecast of future growth on submarine cables to be unrealistically high.</p> | <p>The Authority notes that the assumptions made by the Authority in relation to capacity growth are more conservative than the assumptions Batelco made in its submission supporting its proposed price terms. In its submission, Batelco had used a growth rate of [redacted] [redacted] [redacted]</p> |

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| | <p align="center">[REDACTED]</p> <p>, applied the forecast capacity at the end of the three year period 2021 – 2023. The Authority however, applied the average capacity over that period, which was again a more conservative assumption, resulting (all other things the same) in more reasonable (higher), unit costs than those that would have resulted if Batelco’s proposed capacity growth had been applied.</p> |
| <p>STC believes the draft pricing assessment reflects the best available practical and pragmatic option, and aligns with a FRAND approach adopted in previous Reference Offer assessments. STC notes there is always scope to review such prices as more information becomes available.</p> <p>However, in addition to previous points, STC questions why costs for network elements (submarine cable, submarine equipment and possibly fronthaul) that Batelco does not assume contractual responsibility for in the draft service description, i.e., in relation to provisioning and delivering, fault reporting and testing, are included in the price.</p> | <p>The Authority notes STC’s comment in relation to overall approach on pricing. In relation to submarine equipment and infrastructure that STC considers Batelco does not need to take contractual responsibility for, the Authority refers to its previous comment made in relation to such assets in response to Zain’s comments on Question 10. The Authority otherwise considers that the ownership / control of such assets requires Batelco to take contractual responsibility for the performance of the services under the Service Description.</p> |
| <p>Zain disagrees with the proposed price terms, due to the reasons it set out in response to previous questions, and which in its view, impacts the cost structure of the ICLSA price terms.</p> <p>Zain believes there the Authority has provided insufficient details about forecasted volumes, asset lives and other relevant details that relate to final price terms, on which the industry has not been consulted.</p> <p>Zain also stipulates that any submarine cables costing should accurately reflect the extent of CAPEX and OPEX incurred by Batelco. That is, Batelco should not be allowed to over recover costs that have / are being paid by the submarine cable owner.</p> | <p>The Authority notes Zain’s comments and refers to earlier responses in relation to the volume of capacity used and costs considered in the determination of prices.</p> <p>The Authority has included in the public version of the draft Order consultation, all relevant non-confidential information.</p> |
| <p>Nuetel disagrees with the price terms set out in the draft Order. Specifically, it believes these are too high, especially for speeds greater than 10Gbps. In justifying its position, Nuetel makes a number of points:</p> <ul style="list-style-type: none"> a) FALCON and GBI were built and are funded by private owners. b) Batelco has already recovered its investment cost by providing end to end services. | <p>The TRA notes Nuetel’s comments. However, it has replied to many of these points when responding to the previous questions.</p> <p>In relation to a) and d), the Authority refers to its response to comments made by Zain on Question 10. In addition, the Authority wishes to clarify that the cost stack used to derive the price terms only considers the latest investment into submarine cables and equipment and not the cumulative amounts of</p> |

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| <p>c) Batelco charges annual fees to the submarine cable owners which it believes cover Batelco's OPEX for landing stations.</p> <p>d) Maintenance and upgrade costs for CLS are paid for by the submarine cable owners only.</p> <p>For example, Nuetel argues that the market price for a 100G link between two CLS's including the region to Europe is around \$ 50,000 (BD 18,900) per month while the suggested price in the draft Order for an in-building connection of 100G link is BD 17,457.</p> <p>With regards to the tariff gradient, Nuetel notes that the prices for 100Gbps are 10x the 10Gbps price. It believes that the industry standard multiplication factor is 5x, which would mean the 100GB price would be around BD8,480 / month (assuming no change in the 10GB price).</p> | <p>replacement investments, as initially proposed by Batelco.</p> <p>In relation to b), the Authority refers to its earlier response to Infonas on Question 10, in respect of the principles set out in the Law for the determination of prices for access services provided by a dominant licensee.</p> <p>In relation to c), the Authority refers to its response to Batelco's comment on this Question.</p> <p>In relation to Nuetel's reference to prices in Europe, the Authority notes that the ownership structure in Bahrain and utilisation of submarine cables more generally in the Gulf region is very different from that in Europe. A direct comparison of prices is not appropriate for that reason.</p> <p>In relation to the tariff gradient, the Authority notes that the relevant costs of the ICLSA service are largely fixed and not variable with a change in capacity served. The price terms are, therefore, based on the unit cost, taking account of the total cost and total capacity (in STM1) across all three cable landing stations. The Authority then considers that an appropriate approach to recover the fixed cost of the cable landing station is by recovering the same amount from a constant unit of capacity. This leads to the linear gradient in the Batelco Order. The Authority notes that this approach is the most practical, given uncertainty about future demand and the need to forecast the precise mix of services if a service specific unit price (per STM1 equivalent) was to be derived.</p> |
| <p>Infonas disagrees with the proposed price terms. Specifically, it believes the price / Mbps should decline as capacity increases, whereas it finds that the proposed price terms are based on an almost constant unit price.</p> <p>Infonas believes the tariff gradient should follow market standards of:</p> <ul style="list-style-type: none"> • 10Gbps price = (5-7) x 1Gbps price • 100Gpbs price = (4-6) x 10Gpbs price. <p>It notes that this would be similar to the tariff gradient applied on other regulated products in Bahrain, such as BNet's WDC product.</p> | <p>The Authority notes Infonas's comment and refers to its response to Nuetel, set out above. In relation to WDC, the Authority notes that the matter is different for WDC as the costs are more variable in BNet's network and take-up can be more reliably forecast due to the service having been established for longer.</p> |

The Authority's final decision

Taking into account the comments from all stakeholders and its further review of the cost information provided by Batelco, the Authority determines that the appropriate charges for the ICLSA service and which Batelco shall be required to adopt are as set out in this Order.

Summary of and response to general comments made by respondents to the consultation

In addition to the above responses to specific questions in the consultation, the stakeholders also provided general comments which are summarised below.

| In this table, the Authority provides a summary of and a response to stakeholders' general comments that are not specifically covered by any of the consultation questions. | |
|---|---|
| Summary of stakeholders' submissions | The Authority's analysis and responses |
| <p>Batelco believes that the draft Order (in particular, the price terms) will jeopardise future Batelco investment in submarine cable systems. It argues this will have "serious consequences" for future investment that is essential for the Kingdom, especially as FOG and FALCON cables are nearing the end of their useful lives.</p> <p>Batelco thus argues that the Authority must strike a reasonable balance between promoting access-based competition and infrastructure based competition. It argues that infrastructure based competition can lead to improved market outcomes and create powerful incentives to invest, if conditions are right.</p> <p>In this regard, Batelco summarises the relevant passages of NTP5, noting the emphasis it places on investment in international capacity. [REDACTED]. In Batelco's view, the capital intensive nature of such investments, combined with the long asset lives of international cables, mean investment depends on government and regulatory policies that, "<i>actively stimulate and encourage investment</i>".</p> <p>[REDACTED].</p> <p>[REDACTED].</p> <p>[REDACTED]</p> <p>[REDACTED].</p> | <p>The Authority has set out above, in response to the preceding questions in the consultation, the approach it has taken to determine the ICLSA access charges in the Batelco Reference Offer and reflects these in its final RO Order.</p> <p>In so doing, the Authority accepts that it must find a reasonable balance between promoting different forms of competition, while also recognising the importance, for the Kingdom, of investment in diverse forms of international connectivity, as described in NTP5. [REDACTED]</p> <p>[REDACTED].</p> <p>In particular, the Authority also notes the importance, for consumers and businesses in Bahrain, of a competitive telecommunications sector, and of ensuring widespread use of the telecommunications infrastructure. In a competitive market, the Authority notes that it would expect prices, over the long run, to be set at a level which would allow a reasonably efficient operator to earn a reasonable return on the capital employed in its network, as proxied by the cost of capital. Where competition is insufficient to support such an outcome, regulatory intervention can be necessary to ensure that prices are not set above a competitive level, with regulators typically intervening in markets where there is one (or more) dominant player(s) to set access prices equal to cost, inclusive of the cost of capital.</p> <p>This is what the Authority has done in this case, whilst also recognising some of the uncertainties inherent in the provision of regulated access services, so meaning it has accepted Batelco's position in a number of instances. For example, the Authority has accepted the use of the replacement costs of assets in determining the charges set out, despite Batelco not having incurred such costs. And, while the Authority acknowledges that the price terms included in the draft ROO and those set out in the final ROO are significantly below those proposed by Batelco, it does not accept that this is because the Authority has incorrectly applied its framework. Rather, the Authority notes that Batelco's initial proposed charges were</p> |

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| | <p>significantly inflated and not consistent with the requirements of the Law.</p> <p>[§].</p> <p>[§].</p> <p>[§].</p> <p>[§].</p> |
| <p>In the introduction to its response, STC makes a number of overarching comments. In particular, it comments that it:</p> | <p>The Authority notes STC's concluding comments.</p> <ul style="list-style-type: none">• In relation to the process for implementing the remedy, the Authority notes it is following the proper procedure, ensuring adequate |

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| <p>a) Believes the delay in the imposition of remedies has not benefited access seekers.</p> <p>b) Supports splitting the proposed service into two components, active and passive.</p> <p>c) Seeks assurance that additional elements included in the ICLSC service are essential for the services</p> <p>d) Welcomes the price reductions proposed but seek further reductions and question why ASs have to pay for network elements for which Batelco does not assume contractual responsibility for.</p> <p>e) Asks for a review of how the price for 100Gbps is derived, as it is almost equal to 10x the 10Gbps price, rather than standard 2.5~3x factor.</p> <p>f) - Finds the service level and liability terms in the draft service description favours Batelco and fails to recognise the advantages it gains from its continued vertical integration in this area.</p> <p>Finally, STC states that in its view, the Batelco RO requires more general revision to bring it up to date, rather than revisions focused only on the ICLSA service.</p> | <p>stakeholder involvement while taking account of market developments and government policy.</p> <ul style="list-style-type: none"> • The Authority notes STC's agreement in relation to the active and passive split of the service. • In relation to the elements covered in the service, the Authority confirms that the service covers everything essential for the provision of the cross connect between the BNet and OLO PoP at the landing station and the point of handover with the international submarine cable operator at the national / international boundary. <p>The Authority notes the other points STC makes.</p> <ul style="list-style-type: none"> • In relation to the network elements included in the costing and the costing approach chosen, the Authority refers to earlier comments made in this regard in relation to Question 10. • In relation to comments on non-price terms and conditions, the Authority refers to responses made in relation to Questions 4. <p>Finally, the Authority takes note of STC's comment in relation to the Batelco's RO more generally.</p> |
| <p>Zain also makes a number of general comments in the introduction to its submission.</p> <p>Firstly, it states that, in its view, the envisaged regulated product should be amended to include access to TATA's TGN cable.</p> <p>Zain also believes the proposed ICLSA solution includes unnecessary components.</p> <p>It argues that licenced operators should not be burdened with other non-regulated fees by the landing party for connecting ICS.</p> <p>Finally, Zain argues that licenced operators should be able to purchase IC directly from any cable</p> | <p>The Authority notes Zain's comment and refers to its earlier response in this regard.</p> <p>The Authority notes Zain's comments and refers to earlier comments made in this regard, especially in relation to active equipment at the cable landing station and domestic submarine infrastructure and equipment.</p> <p>The Authority agrees with Zain's comment and notes that the cross connect product as set out in the price and non-price terms of the order does not require any other non-regulated service and corresponding fees to connect from an access seekers POP to an international submarine cable operator (including appropriate BNet services where needed, such as domestic connectivity to the CLS).</p> <p>The Authority again notes Zain's comment. However, under the Kingdom's current legal and licensing framework, a party must have an appropriate licence if</p> |

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| owner and not necessarily through the landing party. | it is to sell telecommunications services to customers in Bahrain. |
| <p>Nuetel raises the following matters for clarification:</p> <ul style="list-style-type: none"> a) Whether RO prices are applicable to Batelco when they offer the services directly to customers b) Whether Batelco can sell service at lower rate than suggested RO prices? c) If there is special treatment / arrangement for some customers, e.g. AWS, where they get discounts – whether these discounts be applicable to ASs. | <p>The Authority notes that alongside the terms and conditions of the Reference Offer, all licensees must also comply with all aspects of the Telecommunications Law, including but not limited to Article 65, concerning anti-competitive conduct. In accordance with this Article and the Authority’s Competition Guidelines¹⁴, a Licensee in a dominant position must not engage in conduct which materially prevents or limits competition in an unfair manner. This includes, for the avoidance of doubt, margin squeeze, whereby a vertically integrated licensee, holding a dominant position upstream, sets prices such that access seekers cannot compete with it in downstream markets.</p> <p>Finally, the Authority notes that it is a key tenet of regulatory best practice and the provision of reference offers, that a dominant party must not unduly discriminate by offering access on preferential terms to its downstream business. For the avoidance of doubt, in the context of the ICLSA service, Batelco is a vertically integrated provider and so is expected and required to adhere to this principle.</p> |

¹⁴ Ref: MCD/02/10/019

Annex B – Service Description

SERVICE DESCRIPTION 2-9: INTERNATIONAL CABLE LANDING STATION ACCESS (ICLSA)

1. THE SERVICE

1.1 The International Cable Landing Station Access (ICLSA) Service provides access to the following cable landing stations, up to the territorial water of the Kingdom of Bahrain, where international submarine cables are landed with Batelco:

- (i) Fiber Optic Gulf;
- (ii) Gulf Bridge International; and
- (iii) Falcon.

(each a “**Cable Landing Station**” as further defined in clause 2) and a link between the particular Cable Landing Station and the point of the relevant international submarine cable at the boundary of the territorial waters of the Kingdom of Bahrain and international waters.

1.2 The ICLSA service is available to an Access Seeker that is a duly licensed operator in the Kingdom of Bahrain.

1.3 The ICLSA service is comprised of refers to either:

- (i) International Cable Landing Station Connection (ICLSC) only; or
- (ii) (The combination of International Cable Landing Station Connection (ICLSC) and Direct International Cable Landing Station Hosting (Direct ICLSH)

together with the ancillary services set out in this Schedule.

2. DEFINITIONS

Subject to clause 9 (Special Conditions) and Annex 3 of this Service Description, capitalised terms not defined in this Service Description are defined in Schedule 8 (Dictionary and Rules of Interpretation and Construction). Terms defined in this Service Description are specific to it.

Access Provider means Batelco.

Access Seeker means the Licensed Operator.

BNET means BNET B.S.C(c)

BNET PoP means the (BNET Point of Presence network connection or aggregation equipment installed in a CLS.

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Cable Landing Station means the telecommunication station usually located in the vicinity of the landing point and housing the optical fibre submarine cable system terminal equipment and that of associated terrestrial systems (as defined in ITU-T Rec. G.972 (10/2020)).

CLS means Cable Landing Station.

Covered Failure means an actual or suspected fault or failure in one of the ICLSA Service components.

Delivery Lead Time means the delivery lead time described in paragraph 6.3.

Direct ICLSH means an ICLSH service provided by the Access Provider where the Access Seeker occupies colocation space at the CLS where the Access Seeker's Equipment is installed as set out under clause 3.2 of this Schedule and pays the Access Seeker charges directly for the ICLSH.

Domestic Point of Handover for the ICLSC service is a port on either the Access Seeker's Equipment in the rack/cabinet located in the CLS under Direct ICLSH or a port on the BNET PoP, as specified in Annex 1 of this Service Description.

ICLSA means International Cable Landing Station Access service as illustrated in Annex 1 of this Schedule.

International Access ODF means the ODF connecting to the submarine SLTE as part of the ICLSC.

International Cable Landing Station Connection ("ICLSC") means the combination of active and passive service(s) between the Domestic Point of Handover to the International Point of Handover.

International Cable Landing Station Hosting ("ICLSH") means a co-location space, designated at the CLS to which the Access Seeker has access either through:

- (a) Direct ICLSH, or;
- (b) BNET's PoP.

International Point of Handover means the point of the relevant international submarine cable that is at the boundary of the territorial water of the Kingdom of Bahrain with international waters.

LOA or Letter of Authorization means a letter or other legal document by which the author, who is a legal person, authorises or legally allows another party to undertake a specified action.

Mean Response Time means the average of the Access Provider's Response Times in respect of each Covered Failure measured over a quarter (being three (3) consecutive months).

Mean Restoration Time means the average of the Access Provider's Restoration Times in respect of each Covered Failure measured over a calendar month.

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National Access ODF mean the ODF connecting the Domestic Point of Handover at the ICLSH to the International Access ODF as part of the ICLSC.

ODF means optical distribution frame.

PoP means Point of Presence.

Service Commencement Date for each Order for the ICLSA Service shall be the date identified in accordance with clause 6.4(b)

Service Credit means, in relation to a single Service Credit, that amount represented by two percent (2%) of the monthly Charges for the ICLSA Service.

Service Period means the term of an ICLSA Service which shall be a minimum of twelve months from the Service Commencement Date and which continues automatically from the expiry of the initial term mentioned in the Order on a rollover basis (which is monthly by default unless otherwise agreed in a Order) until terminated under Clause 7.

SLTE mean the Submarine Line Terminal Equipment

Submarine Cable means a communications cable laid beneath the sea or other body of water to provide communications or data transfer from one land based location to another.

Target Availability means that amount of time over a quarter, being three (3) consecutive months, during which the ICLSA Service does not suffer a certain type of failure, expressed on a percentage basis.

Threshold Response Time means, in relation to a Covered Failure, the threshold response times set out in clause 6.6(c).

Threshold Restoration Time means, in relation to a Covered Failure, the threshold restoration times set out in clause 6.6(c).

Regulator means the Telecommunications Regulatory Authority of the Kingdom of Bahrain.

3. INTERNATIONAL CABLE LANDING STATION HOSTING (ICLSH) SERVICE

- 3.1 The Access Provider shall provide the Direct ICLSH Service using the order procedure specified in Schedule 5 subject to this clause 3 and clause 6 of this Service Description (which shall take precedence).
- 3.2 Unless the Access Seeker specifically requests and the Access Provider exceptionally agrees, the Direct ICLSH shall be located inside the secure shared space of the designated CLS and the Access Seeker acknowledges that other Access Provider customers will have shared access to the ICLSH. Such request shall be subject to additional charges agreed between the Access Seeker and the Access Provider.
- 3.3 Subject to clause 3.4, the Access Provider shall provide the Access Seeker with access to the Direct ICLSH to allow the Access Seeker's personnel to access the Direct ICLSH in order to enable the Access Seeker to perform its obligations

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under this Service.

- 3.4 The Access Seeker's personnel must adhere to the Access Provider's reasonable written security and site regulations relating to the Direct ICLSH, which include the Access Provider's site and security regulations as set out in its Facility Access Technical Manual, as and when such manual has been submitted by the Access Provider to the Regulator.
- 3.5 The Access Provider will provide a safe working environment for any Access Seeker personnel for the Direct ICLSH.
- 3.6 The Access Seeker understands and agrees that third parties such as the emergency services and law enforcement agencies may have a legal right of entry to the Direct ICLSH and the surrounding area at any time.
- 3.7 All Access Seeker access must be escorted access, which comprises the provision of Access Provider staff to escort the Access Seeker's personnel to and from the ICLSH.
- 3.8 Any Domestic Point of Handover for connectivity terminating to the Access's Seeker's PoP equipment located under the Direct ICLSH Service should terminate to the Access Seeker's PoP at the designated area.
- 3.9 The ICLSH Service does not provide any storage facilities to the Access Seeker.

4. ICLSH RELATED SERVICES

- 5.1 The Access Provider will:
 - (a) maintain and repair the ICLSH to such standard as is adequate given the age and nature of the facility;
 - (b) provide a raised floor;
 - (c) clean and light the ICLSH to a reasonable standard;
 - (d) subject to the Access Seeker's Equipment complying with specifications under any type approval requirement mandated by the Regulator, supply cooling and ventilation for the ICLSH as a whole to such reasonable temperatures as conditions shall determine from time to time;
 - (e) provide a supply of a/c electricity to the ICLSH of 3kW/h (which can be increased in increments of 1kW/h up to a maximum of 7kW/h. The price of additional power requirements up to 7kW/h and the consumption of power, should be based on the actual costs incurred by the Access Provider and apply the same interruption and back-up protection to this power supply as applies to existing customers in the same facility;
 - (f) operate fire detection and suppression systems, provided that the Access Seeker fulfils its obligations under section 17 of Schedule 9 (Supply Terms);

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- (g) provide a cable tray or raised floor equivalent within the perimeter of the designated ICLSH for use by the Access Seeker to implement a connection to or between Access Seeker Equipment; and
- (h) provide internal patching between the Access Seeker Domestic Point of Handover to the National Access ODF.

5. INTERNATIONAL CABLE LANDING STATION CONNECTION (ICLSC) SERVICE

- 6.1 The Access Provider shall provide the ICLSC Service using the order procedure specified in Schedule 5 subject to this clause 5 and clause of this Service Description (which shall take precedence).
- 6.2 The Access Seeker should submit a complete filled Service Request. The Service Request should include all details necessary for the Access Provider to provide the ICLSC Service as mentioned in clause 6.2(a) of this Schedule.
- 6.3 The Access Seeker should provide all required LoAs and documents for the Access Provider to complete all patching activities of the ICLSC service as set out in clause 6.2 (b) of this Schedule.

6. GENERAL SERVICE TERMS

- 6.1 The Access Seeker acknowledges:
 - (a) A Domestic Point of Handover in the CLS is}required_to_order_and maintain the ICLSC Service components of the Service
 - (b) If the Access fails to provide details or documents required by the Access Provider this could lead to delays in provisioning the ICLSA;
 - (c) Except as expressly stated otherwise in this Service Description, the Access Provider will provide the ICLSA as per the Key Performance Indicators (“KPIs”) set out in the table below, with time being of the essence. For the avoidance of doubt, for the ICLSA the KPIs below apply in place of any key performance indicators set out in the Body Terms of the Reference Offer.

| No. | Milestone | KPI (Working Days) |
|-----|---------------------------------|--------------------|
| 1 | Service Request Acknowledgement | 2 |

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| | | |
|----------|---|--|
| 2 | Service Request Acceptance | +2 (Subject to receiving a complete filled Service Request with accurate details and all relevant documents mentioned in the Service Description) |
| 3 | Raising Orders in the System | +1 |
| 4 | Joint Site Survey | 3 (If required and after the Access Provider receives a request from the Access Seeker) |
| 6 | Handover the Service | 5 (From raising the Service Request in the systems and if no additional physical resources are required (both for new requests and for upgrades/downgrades)) 20 (From raising the Service Request in the systems and if additional physical resources are required) |
| 7 | Confirm Service Acceptance by Access Seeker | 2 (From Service Handover date)) |

The national access and the international submarine cable system capacity are not part of the ICLSA service. The Access Provider does not take any responsibility of such services and it is the sole responsibility of the Access Seeker to communicate with its providers of these services;

- (d) The Access Provider will start billing the Access Seeker once the ICLSA Service is accepted as per the KPI and clause 6.4(a)
- (e) The ICLSA presentation interface to the Access Seeker will be optical;
- (f) The Access Seeker acknowledges that the submarine segment after the SLTE in the CLS, in case if the Access Provider does not own and/or effectively control it, shall not be part of the provisioning and delivery. The Access Seeker shall be the sole responsible party to communicate with the submarine cable owner for all provisioning and delivery activities beyond

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the SLTE; and

- (g) Except as provided in 6.1(a) above, the ICLSA shall not require the Access Seeker to obtain any additional non-regulated services in order to obtain it.

6.2 Ordering:

- (a) The Access Seeker shall submit a correctly completed Service Request. The Service Request should include all details necessary for the Access Provider to provide the ICLSC Service. Such details should include, but not limited to:
 - (i) Port details for the Domestic Point of Handover at the Access Seeker's or BNET's PoP part of the ICLSH.
 - (ii) Port details at the SLTE of the cable owner, if the SLTE is operated by other parties than the Access Provider.
- (b) In order for the Access Provider to complete all patching activities of the ICLSC service, the Access Seeker should provide the following:
 - (i) If the Access Seeker is using a national access service from BNET, LoA should be provided by BNET to allow the Access Provider to patch the assigned port on BNET's PoP.
 - (ii) If the Access Seeker is using his own PoP part of the ICLSH, LoA should be provided by the Access Seeker to allow the Access Provider to patch the assigned port on the Access Seeker's PoP.
 - (iii) LoA should be provided by the submarine cable system owner and addressed to the Access Provider, if the SLTE is not operated by the Access Provider, to allow the Access Provider to patch the assigned port on the SLTE-

6.3 Delivery and Installation Lead Times for ICLSA Service:

- (a) The Delivery Lead Time for the installation of an ICLSA Service for an Order placed by the Access Seeker and accepted by the Access Provider will be in accordance with the timetable set out in Clause 6.1(c) of this Schedule. For the purposes of this Schedule the times set out in the timetable are of the essence, and are not guidelines; and
- (b) The Service Rebates for a failure to meet the Delivery Lead Time for the ICLSA service in the preceding paragraph are as follows:

| Failure to meet Delivery Lead time | Rebate |
|---|---------------|
|---|---------------|

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| | |
|--|--------------------|
| Failure to meet the applicable Delivery Lead Time | 50 Service Credits |
| Every Working Day (or part of a Working Day) until Milestone 7 acceptance as per the KPI and clause 6.4(a) | 25 Service Credits |

The Service Rebate calculated under this clause 6.3(b), in relation to any month, will not exceed the monthly Charges for the ICLSA Service, excepting that payment of the Service Rebate is without prejudice to the Access Seeker's rights to recover damages from the Access Provider.

6.4 Testing

- (a) The Access Provider will notify the Access Seeker when the ICLSC has been provisioned and provide a Service Handover Letter. The Access Seeker will have 2 Working Days, as defined in the Body Terms, from the date of the Service Handover Letter to test and report any faults indicating a valid performance-based reason for not accepting the Service. If the Access Seeker does not sign nor report any faults for acceptance during the 2 Working Day period, it will be deemed to have accepted the ICLSC Service with effect from the date of the Service Handover Letter.
- (b) The Service Commencement Date is the date of actual or deemed acceptance under paragraph 6.3(a).
- (c) The Access Provider can be available (if requested by the Access Seeker giving a sufficient notice period), during the 2 Working Day period of testing extended to the Access Seeker, as defined in the Body Terms, to support testing the ICLSC service. If physical attendance is required in the CLS by the Access Provider personnel to support such testing for initial service provisioning, the Access Provider will not level any additional charge for such attendance.
- (d) In the case where the Access Provider does not own and /or effectively control the submarine segment after the SLTE, the Access Provider shall only be responsible for testing up to the SLTE. Therefore, in such a case, the Access Seeker shall be the sole responsible party to communicate with the submarine cable owner for all testing activities beyond the SLTE.
- (e) The Access Seeker acknowledges that if the Access Provider activates the ICLSC service ahead of the activation of the submarine segment beyond the SLTE, in case the Access Provider does not own or effectively control

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it, the Access Provider shall start the billing of the ICLSC service as per the Service Commencement Date.

6.5 Performance and uptime:

- (a) The Target Availability for the ICLSA ICLSC shall be as set out below, alongside the Service Rebate regime that will apply (without prejudice to the Access Seeker's rights to recover damages from the Access Provider) if the relevant Target Availability falls below the stated threshold:

| Calculation | Target Availability | Service Rebate |
|---|----------------------------|---|
| Target Availability for periods free of Covered Failure | 99.9% | 2 Service Credits per 0.01% or part thereof below the Target Availability but not exceeding the monthly Charges for the ICLSA Service |

6.6 Fault response and repair:

- (a) The Access Seeker will as soon as practicable after becoming aware of a Fault with the ICLSC Service or any other Covered Failure, notify the Access Provider of that Fault in accordance with the procedures for the reporting of faults set out in Schedule 6 (Fault Management) for the reporting of faults, Fault investigation and identification of the Fault Owner and Other Affected Party.
- (b) The Access Provider can be available as the first point of contact for fault management in to the ICLSC Service, excluding the submarine segment after the SLTE, if the Access Provider does not own and/or effectively control it. If the Fault is not a Covered Failure then the Access Provider's standard rates will apply for assistance.
- (c) The Access Provider agrees to observe the following Response Times and Restoration Times:

| Fault Type | Response Time | Restoration Time | Threshold Response Time | Threshold Restoration Time |
|-------------------|----------------------|-------------------------|--------------------------------|-----------------------------------|
| | | | | |

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| | | | | |
|-----------------|------------|---------|------------|---------|
| Covered Failure | 10 minutes | 3 hours | 15 minutes | 5 hours |
|-----------------|------------|---------|------------|---------|

(d) Where the Access Provider's Mean Response Time or Mean Restoration Time exceeds the Threshold Response Time or Threshold Restoration Time respectively for Covered Failures then the following Service Rebates, assessed on a quarterly basis, will apply without prejudice to the Access Seeker's rights to recover damages from the Access Provider :

| Fault type (as defined in Schedule 60) | Time by which Mean Response Time exceeds Threshold Response Time | Service Rebate | Time by which Mean Restoration Time exceeds Threshold Restoration Time | Service Rebate |
|---|---|---|---|---|
| Covered Failure | 15 minutes | 20 Service Credits | 1 hour | 20 Service Credits |
| | 1 hour | 10 Service Credits | 2 hours | 10 Service Credits |
| | Greater than 1 hour | 10 Service Credits for each hour (or part hour) | Greater than 2 hours | 10 Service Credits for each hour (or part hour) |

7. TERMINATION

7.1 During the initial term of the Service Period mentioned in the Order the Access Seeker shall have the right to terminate the Service for convenience subject to a three (3) months' advance written notice to the Access Provider. After expiry of the initial term of the Service Period mentioned in the Order the Service Period may continue on a rollover basis (which will be monthly by default ,unless otherwise specified in the Order), in which case the Access Seeker shall have the right to terminate the Service for convenience subject to at least a one (1) months advance written notice to the Access Provider.

7.2 The Parties acknowledge that a termination of the Direct ICLSH service shall not automatically trigger a termination of the ICLSC service connected to the Direct ICLSH service. The Access Provider will be-provide the Access Seeker with the option to vary the ICLSH service to allow the Access Seeker to migrate their equipment from the Direct ICLSH to an ICLSH using the BNET PoP.

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7.3 In the event of termination under clause 7.1, the Access Seeker must pay the Access Provider by way of liquidated damages the charges for any of the ICLSA Services until the end of the notification period or the Minimum Term, whichever is greater.

7.4 Following termination of the Service, the Access Seeker shall remove all equipment from the CLS within a period of ten (10) Working Days from the effective date of termination. If the Access Seeker fails to do so, the Access Provider reserves its right to switch off or dismantle the Access Seeker's equipment and charge the Access Seeker for any related direct and indirect cost incurred due to this activity. The Access Seeker indemnifies the Access Provider from any direct and indirect losses arising from such activity.

8. CHARGES

8.1 The Access Seeker shall pay to the Access Provider the relevant Charges determined in accordance with Schedule 3 of this Reference Offer.

8.2 All prices do not include VAT or any other sales, use or other transactional tax, duty or impost. The existing rules concerning VAT or such taxes, duties or imposts in the Kingdom of Bahrain will be applied separately in the invoice.

8.3 Rental Charges will be invoiced monthly in advance. Rental Charges for Services provided for part of a month will be charged on a pro-rata basis.

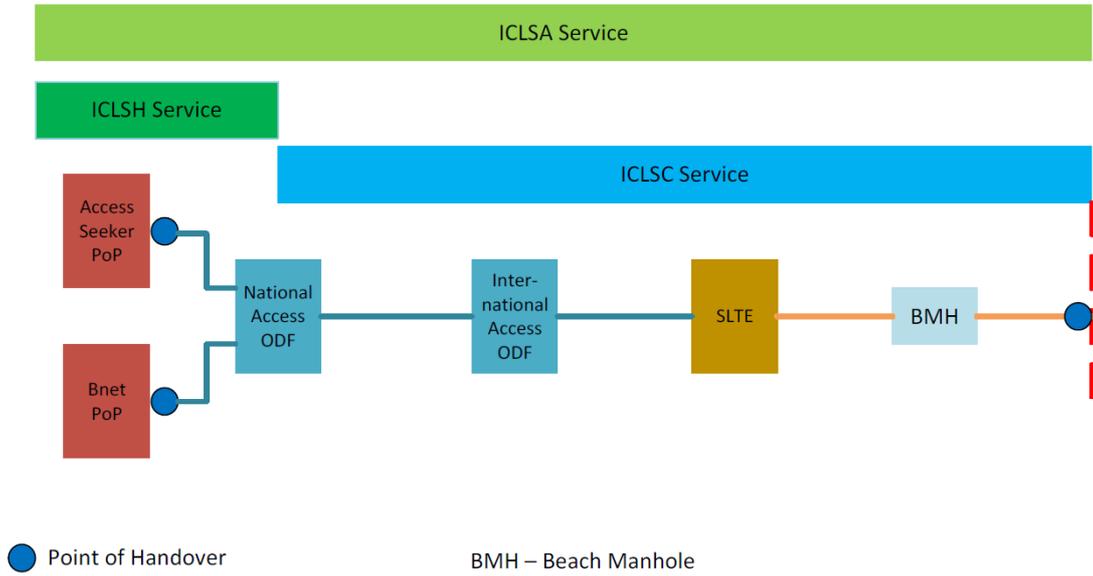
8.4 Non-Recurring Charges related to the provisioning of the ICLSA service shall be invoiced in arrears.

9. SPECIAL CONDITIONS

9.1 The terms of this Reference Offer shall be modified as set out in Annex 3 of this Service Description as special conditions (the "Special Conditions"), to the extent that its provisions may not apply, or may need amending, for the ICLSA service.

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Annex 1 - ICLSA Diagram:



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Annex 2 - Service Request Form:

Batelco

ACCESS REQUEST FORM
International Cable Landing Station Access (ILCSA)

This Agreement is made Between Batelco and customer and is governed by Batelco's Reference offer on the ILCSA Service

Request Type: | *select>

| CUSTOMER DETAILS | | | | | |
|---|---|----------------------|---|---|----------------------|
| Company Name: | <input type="text"/> | | <input type="checkbox"/> (same as customer details) | | |
| Contact Name: | <input type="text"/> | | Billing Contact: | <input type="text"/> | |
| Postal Address: | <input type="text"/> | | Billing Address: | <input type="text"/> | |
| Phone Number: | <input type="text"/> | | Phone Number: | <input type="text"/> | |
| Contact e-mail: | <input type="text"/> | | Contact e-mail: | <input type="text"/> | |
| SERVICE DETAILS | | | | | |
| Service Type: | <input type="text" value="<select>"/> | | Contract Period: | <input type="text" value="<select>"/> | |
| CLS: | <input type="text" value="<select>"/> | | | | |
| Description | Capacity | Qty | Curr. | Net MRC | NRC |
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Grand Total: | | | | 0.00 | 0.00 |
| Total amount (in words): | <input type="text"/> | | | | |
| Remarks: | <input type="text"/> | | | | |
| AGREEMENT | | | | | |
| By signing the below, the Customer, declares that he/she has read, understood and accepted the terms and conditions of the Agreement. | | | | | |
| For and on behalf of Customer: | | | For and on behalf of Batelco: | | |
| Signature: | <input type="text"/> | | Signature: | <input type="text"/> | |
| Name: | <input type="text"/> | | Name: | <input type="text"/> | |
| Title: | <input type="text"/> | | Title: | <input type="text"/> | |
| Date: | <input type="text"/> | | Date: | <input type="text"/> | |

Customer initials:

Batelco initials:

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ORDER FORM
Global Business

| | | | |
|---------------------------|---|---------------|---|
| Customer Name: | <input type="text" value="Enter name in Order Form"/> | Service Type: | <input type="text" value="<select>"/> |
| SOLUTION DIAGRAM | | | |
| | | | |
| ADDITIONAL REMARKS | | | |
| Remarks: | | | |

Customer Initials: _____

Batelco Initials: _____

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Annex 3 - Special Conditions

The following Special Conditions are permitted modifications to the Reference Offer, and its respective schedules, as described in clause 9 of this Service Description and set out below. For the avoidance of doubt, these Special Conditions apply only to the ICLSA service:

| Reference | Special Condition |
|--|---|
| Clause 3.1 of the Body Terms | To add the following point (c): <i>“Any other terms that has been agreed between the Access Provider and the Access Seeker set out in the Service Request provided that such terms are made available to all Access Seekers ”</i> |
| Clause 6.1 of the Body Terms | For the ICLSA Service clause 6.1 (c) of the Service Description applies. |
| Clause 4 of Schedule 2 (RO Service Request) | To amend clause 4 as follows: <i>“ The Requesting Operator shall provide all details required under clauses 6.2, 6.3 and Annex 2 of Schedule 1 2-9 (Service Description ICLSA). The Requesting Operator’s Service Request must contain:”</i> For the purposes of Schedule 2, references to Requesting Operator will be deemed to be a reference to the Access Seeker under this Service Description |
| Clause 13 of Schedule 2 (RO Service Request) | To add the following clause 13: <i>“ The Access Seeker shall provide an Access Request as set out in Annex A. The Access Provider shall, in return, provide a Service Handover Letter as set out in Annex 2. of this Service Description”</i> |
| Annex A of Schedule 2 (RO Service Request) | See Annex 2: of this Service Description |
| Annex B of Schedule 2 (RO Service Request) | See Annex 2: of this Service Description |
| Clause 2.1 of Schedule 5 (Ordering and Provisioning) | To replace clause 2.1 with the following: <i>“The Access Provider shall comply with all ICLSA related milestones in accordance with clause 6.1(c) of this Service Description.”</i> |

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| <p>Clause 3.1 of Schedule 5 (Ordering and Provisioning)</p> | <p>To replace clause 3.1 with the following: <i>“The Access Provider will reply to an Order advising that the Order is accepted or rejected in accordance with clause 6 of the Body Terms.”</i> Reference to an Order will be deemed to be reference to a Service Request</p> |
| <p>Clause 3.2 of Schedule 5 (Ordering and Provisioning)</p> | <p>To exclude clause 3.2 in its entirety.</p> |
| <p>Clause 3.3 of Schedule 5 (Ordering and Provisioning)</p> | <p>To add the following point (i) to clause 3.3: <i>“the Order or Service Request form is not properly completed;”</i></p> |
| <p>Clause 5.1 of Schedule 5 (Ordering and Provisioning)</p> | <p>To amend clause 5.1 as follows: <i>“Batelco will advise the Access Seeker of the Implementation Date for fulfilment of an accepted Order in accordance with clause 6 of the Body Terms.”</i></p> |
| <p>Clause 6.1 of Schedule 5 (Ordering and Provisioning)</p> | <p>To amend clause 6.1 as follows: <i>“The Access Provider will confirm completion of an Order in accordance with Clause 6 of the Body Terms, or at a time otherwise agreed by the parties. Unless the Access Seeker advises Batelco that a Service has not been provisioned correctly or otherwise does not conform to the applicable Service Description and in accordance with Clause 6 of the Body Terms, and after receiving Batelco’s Service Handover and confirmation of completion or of commencement of Service (whichever occurs first), then the Access Seeker is deemed to have accepted that Service.”</i></p> |
| <p>Clause 2.1 (b) of Schedule 6 (Fault Management)</p> | <p>To replace point (b) with the following: <i>“A Fault located within the Batelco Network (Batelco Network Fault) and within the demarcations of the ICLSA Service. For the avoidance of doubt, faults located outside the scope of the ICLSA Service, such as national access or in the submarine segment beyond the SLTE, where Batelco does not operate and /or effectively control it, is not covered nor considered as part of Batelco’s responsibility.”</i></p> |

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| <p>Clause 2.2 of Schedule 6 (Fault Management)</p> | <p>To replace clause 2.2 with the following: <i>“Faults will be addressed depending on individual circumstances and shall be categorized into P1 and P2, as follows:</i> <i>a) P1 Faults defined as an outage which results in the Access Seeker being unable to fully utilize the Services; and</i> <i>b) P2 Faults defined as service degradation that does not amount to P1 service incident.”</i></p> |
| <p>Section 3 of Schedule 6 (Fault Management)</p> | <p>To replace the term “FCC” with “NOC”.</p> |
| <p>Clause 3.1 of Schedule 6 (Fault Management)</p> | <p>To replace clause 3.1 with the following: <i>“The Access Seeker shall report faults directly to Batelco Network Operation Center (NOC) as per the below contact details:</i> <p align="center"><i>Tel: +973 17271172</i> <i>eFax: +973 17238183</i> <i>email: NOC_BTC@btc.com.bh</i></p> </p> |
| <p>Clause 3.6 of Schedule 6 (Fault Management)</p> | <p>To replace clause 3.6 with the following: <i>“ Notwithstanding clause 3.5 of this Schedule 6, the NOC will only investigate Faults related to the ICLSA Service. Faults in the national segment or in the segment beyond the SLTE, where Access Provider does not operate it, shall not be investigated by the NOC.”</i></p> |
| <p>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</p> | <p>Where context requires, for the purposes of this Service Description 2-9: International Cable Landing Station Access (ICLSA), a reference in any other part of the Reference Offer to Licensed Operator will be deemed to be a reference to the Access Seeker under this Service Description</p> |
| <p>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</p> | <p>Insert the words “Service Handover” in definition of “Actual RFS Date” as follows: Actual RFS Date means the date on which Milestone 7 (Confirm Service Acceptance Access Seeker) has occurred or is deemed to have occurred under clause 6.1(d) of the Service Description</p> |

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| <p>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</p> | <p>Add the following new definitions:</p> <p>Implementation Date means Batelco’s scheduled fulfilment of the Order accordance with clause 5.1 of Schedule 5.</p> <p>Service Handover Letter means the document issued by Batelco to the Access Seeker to confirm that:</p> <p>(a) the connection has been provisioned and tested by Batelco; and</p> <p>((b) the connection is ready for service and the Access Seeker will be invoiced accordingly</p> |
| <p>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</p> | <p>Replace the word “Connection” with “Service” in definition of “Cancellation Request” as follows:</p> <p>Cancellation Request means a Service Request for cancelling an existing Service.</p> |
| <p>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</p> | <p>Amend the definition of Facility as follows:</p> <p>Replace sub-paragraph (d) of the definition of Facility with the following: <i>Cable Landing Station or part of Cable Landing Station under an ICLSH service.</i></p> <p>Add the words or “Direct ICLSH” after the words “Facilities Access”</p> |
| <p>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</p> | <p>Change the defined term Facilities Access Application to Facilities Access or Direct ICLSH Application.</p> |
| <p>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</p> | <p>Insert the words “and Direct ICLSH” in the first paragraph of the definition of Facility Access Technical Manual as follows:</p> <p>Facility Access Technical Manual means the manual published from time to time by the Access Provider which sets out the technical and operational matters relating to access to Facilities and Direct ICLSH including: ...</p> |
| <p>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</p> | <p>Replace the term “OLO” with “Access Seeker”.</p> |

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|---|---|
| <p>Clause 2.2 of Schedule 9 (Supply Terms)</p> | <p>To amend the references under clause 2.2 as follows: <i>“...unless terminated earlier in accordance with the provision of these Supply Terms or the termination provisions under Schedule 1 2-9.”</i></p> |
| <p>Clause 10.6 of Schedule 9 (Supply Terms)</p> | <p>To replace clause 10.6 with the following; <i>If an Access Provider breaches any Service Level or quality of service requirement in the Service Description for the ICLSA Service , then without prejudice to the Access Seeker’s rights to recover damages from the Access Provider, the Access Provider will:</i></p> <p>(a) <i>in the future, take reasonable steps to comply with that quality of service requirement; and</i></p> <p>(b) <i>make available or offer to the Access Seeker the Service Rebate or other specific remedy applicable to that Service Level or quality of service requirement, as set out in the Service Description for the ICLSA Service.</i></p> |
| <p>Clause 15.7 of Schedule 9 (Supply Terms)</p> | <p>To add the following clause 15.7: <i>“The early termination of the ICLSA Service by the Access Seeker shall also be subject to clause 6.7 of Schedule 1 2-9. ”</i></p> |
| <p>Clause 17.3 of Schedule 9 (Supply Terms)</p> | <p>To add the words <i>“Subject to clause 10.6,”</i> to clause 17.3 so it reads:</p> <p>17.13 <i>Subject to clause 10.6, if a Schedule to these Supply Terms contains a remedy for the failure of a party (Liable Party) to perform its obligations under that Schedule, then that remedy is the sole and exclusive liability of the Liable Party, its Related Corporations, and its People, in connection with the performance of that obligation, and is the sole remedy of that other party against the Liable Party, its Related Corporations and its People in connection with the performance of that obligation</i></p> |

Order on the Reference Offer of Batelco
Annex C – FALCON and FOG input costs

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The following two spreadsheet set out the FALCON and FOG assets considered in the Authority's determination of the draft ROO recurring cross connect charges.

[X][X]

Order on the Reference Offer of Batelco
Annex D – List of acronyms and definitions

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|----------------|--|
| Batelco | Bahrain Telecommunications Company B.S.C |
| BHD | Bahraini Dinar |
| CAPEX | CAPital EXpenditure |
| CLS | Cable Landing Station |
| FAC | Fully Allocated Cost |
| FALCON | FLAG Alcatel-Lucent Optical Network submarine cable system |
| FOG | Fibre Optic Gulf submarine cable system |
| GBI | Gulf Bridge International submarine cable system |
| Gbit/s or Gbps | Gigabits per second |
| GCX | Global Cloud Xchange |
| ICS | International Connectivity Service |
| ICLSA | International Cable Landing Station Access Service |
| ICLSC | International Cable Landing Station Connectivity Service |
| ICLSH | International Cable Landing Station Hosting Service |
| IFC | International Falcon Connect |
| kbit/s or kbps | Kilobits per second |
| KPI | Key Performance Indicator |
| kW / kW/h | kilowatt / kilowatt hour |
| LoA | Letter of Authorisation |
| LRIC | Long Run Incremental Cost |
| MB | Megabytes |
| Mbit/s or Mbps | Megabits per second |
| MPLS | Multiprotocol Label Switching |
| MRC | Monthly Recurring Charge |
| NOC | Network Operation Center |
| NRC | Non-Recurring Charge |
| ODF | Optical Distribution Frame |
| OLO | Other Licensed Operator (i.e., in this context, any licensee other than Batelco or BNET) |
| OLT | Optical Line Terminal |
| ONT | Optical Network Terminal |
| OPEX | Operating expenses |
| PoP | Point of Presence |
| RFI | Request for Information |
| RO | Reference Offer |
| ROO | Reference Offer Order |
| STM | Synchronous Transfer Mode |
| SLTE | Submarine Line Terminal Equipment |
| TRA | Telecommunications Regulatory Authority of the Kingdom of Bahrain |

Order on the Reference Offer of Batelco
Annex D – List of acronyms and definitions

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|------|----------------------------------|
| WACC | Weighted Average Cost of Capital |
| WD | Working Day(s) |