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

A Consultation on the draft Order on the Reference Offer of Batelco

28 June 2021
Ref: MCD/06/21/012

Public Version
(Confidential information has been replaced by [●])

Purpose: to set the fair, reasonable and non-discriminatory price and non-price terms for the International Cable Landing Station Access (ICLSA) Service included in Bahrain Telecommunications Company B.S.C’s Reference Offer.
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Instructions for submitting a response

The Telecommunications Regulatory Authority (the ‘Authority’) invites comments on this draft Order from all interested parties. Comments should be submitted to the Authority by 4pm, 28 July 2021.

Responses should be sent to the Authority preferably by email (or by post) to the attention of:

Director, Market and Competition Directorate
mcd@tra.org.bh
Telecommunications Regulatory Authority
P.O. Box 10353
Manama
Kingdom of Bahrain
Fax: +973 1753 2125

Responses should include:

▪ the name of the company/institution/association etc.;
▪ the name of the principal contact person;
▪ full contact details (physical address, telephone number, fax number, and email address); and
▪ in the cases of responses from individual consumers, names and contact details.

The Authority expects the responses to follow the same structure as set out in the draft Order and the Annex. The Authority also invites respondents to substantiate their responses to the questions raised, wherever possible by providing factual evidence to support their responses.

In the interest of transparency, the Authority will make all submissions received available to the public, subject to the confidentiality of the information received. The Authority could allow one round of cross-submissions, where respondents who provided a submission on the draft Order are able to provide a cross-submission in which they can comment on the submissions of other parties. The Authority will ensure that public versions of the submissions are available on the Authority’s website with sufficient time to permit cross-submissions.

The Authority will evaluate requests for confidentiality in line with relevant legal provisions and the Authority’s published guidance on the treatment of confidential and non-confidential information.1

Respondents are required to clearly mark any specific information included in their submission which is considered confidential. Where such confidential information is included, respondents are required to provide both a confidential and non-confidential version of their submission. If a submission is marked confidential in its entirety, reasons for this should be provided. The

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Authority may publish or refrain from publishing any document or submission at its sole discretion.

Once the Authority has received and considered submissions on this draft Order, the Authority will issue a final Order, together with the Reasoning for the Authority's findings.
DRAFT REFERENCE OFFER ORDER ON BAHRAIN TELECOMMUNICATIONS COMPANY B.S.C. (the “Batelco Order”)

1. Pursuant to:
   a. The exercise of its powers under article 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 2,3,4,5 and 6 of the Access Regulation issued on 30 April 2005 (the ’Access Regulation’).
   b. The Final Determination of Significant Market Power and Dominance in International Connectivity Markets, issued 23rd July 2020 (“the Determination”);
   c. The legal basis and reasoning set out in Annex A to this 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 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 apply to all new and existing regulated wholesale products and services that are covered by the Determination.

<table>
<thead>
<tr>
<th>Service</th>
<th>Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>One off installation charge (irrespective of capacity)</td>
<td>BHD 226 per installation</td>
</tr>
<tr>
<td>Passive cross connect (irrespective of capacity)</td>
<td>BHD 41 per cross connect per month</td>
</tr>
<tr>
<td><strong>Active cross connect</strong></td>
<td><strong>BHD per cross connect per month</strong></td>
</tr>
<tr>
<td>STM1</td>
<td>38</td>
</tr>
<tr>
<td>STM4</td>
<td>117</td>
</tr>
<tr>
<td>STM16</td>
<td>429</td>
</tr>
<tr>
<td>1Gbps</td>
<td>178</td>
</tr>
<tr>
<td>STM64 / 10Gbps</td>
<td>1,696</td>
</tr>
<tr>
<td>100Gbps</td>
<td>17,457</td>
</tr>
<tr>
<td>Hosting service</td>
<td>BHD 496 per rack per month</td>
</tr>
</tbody>
</table>

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

Entry into force

5. This Batelco Order is effective on the date of its issuance.

6. Within 7 calendar days following the date of issuance of this Batelco Order, Batelco shall notify via email all its wholesale customers copying the Authority of the new ordered price terms and the new ordered non-price-terms, including their effective implementation date which shall not be later than 60 calendar days following issuance of this Batelco Order.

7. Within 60 calendar days from the date of issuance of this Batelco Order:
   a. Batelco shall reflect the ordered price terms and ordered non-price terms for the ICLSA Service in its RO by amending the relevant RO schedules;
   b. Batelco shall, before the effective implementation date, make available on its website ‘marked-up’ and ‘unmarked’ versions of the RO; and
   c. Batelco shall promptly thereafter notify via email all its wholesale customers copying the Authority of the RO publication.

8. Batelco shall ensure that the ‘marked-up” versions of RO schedules reflecting ordered price terms and ordered non-price terms remain available on its website for a minimum period of three (3) calendar months following the publication of the RO. For the avoidance of doubt, Batelco shall ensure that the ‘unmarked’ versions of the RO shall remain available on its website indefinitely until such time as the Authority determines otherwise.

9. 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

10. 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 consequently be subject to enforcement action pursuant to the relevant provisions of the Law.

Signed on 28 June 2021

Nasser bin Mohamed Al-Khalifa
Acting General Director
Telecommunications Regulatory Authority
Manama, Kingdom of Bahrain
Annex A – Order Legal Basis and Reasoning

1 Introduction

11. 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. Accordingly, the Authority will consult with the wider industry and stakeholders on this draft Order.

12. 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 draft 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.

1.1 Legal basis

13. This Order is issued by the Telecommunications Regulatory Authority (the “Authority”) pursuant to Article 3(c)(1), Article 57(b) and Article 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 2, 3, 4, 5 and 6 of the Access Regulation issued 30 April 2005. 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 2 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 Remedies identified in Article 3 of the Regulation, where such obligations include an obligation to meet all reasonable requests for access in the forms mandated by the Authority from time to time, and the obligation to make available a RO, in accordance with Article 4 of the Regulation;

e. Article 4 of the Access Regulation sets out the minimum requirements for a RO;
f. Article 5 of the Access Regulation sets out the process for the Authority to approve a RO, including the process for the Authority to issue an Order, setting out the terms and conditions which shall apply; and

g. Article 6 of the Access Regulation requires that tariffs for all access services shall be fair, reasonable and non-discriminatory and provides that the Authority may require to adjust the tariffs proposed for its RO, to ensure they meet this criterion.

14. 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 June 2020 with the changes set out in that Offer reflecting those ordered by the Authority as per its Order issued on 30 May 2019 regarding the Reference Offer of Batelco (Ref: MCD/05/19/047).

15. 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.

16. 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

17. 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.

18. 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.

19. Batelco responded to the Authority on 10 December 2020, following the Authority granting it an extension of one week.

20. 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.

21. 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.

22. 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.

23. 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 schedul...
provisions in its Existing RO which shall not apply to the ICS, or which are amended for the ICS.

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.
2 The proposed non-price terms

30. In this part of Annex 1 to the Draft Order, the Authority describes the key issues it has considered when reviewing the draft Service Description provided by Batelco and determining not to approve that offer and to issue an order under Article 57(b) of the Law.

31. This should be read in conjunction with Annex B, which sets out the Authority’s exact proposed amendments to Batelco’s Service Description.² 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

32. 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).

33. 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.

34. 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.

² 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.
35. 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.

36. 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.

37. 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.

38. 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 proposing to order 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.

39. 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.”

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?

40. 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.

41. 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).

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Draft Order on the Reference Offer of Batelco  
Annex A – Order Legal Basis and Reasoning

Manual for the Existing RO). The Authority is therefore proposing to order 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?

2.2 Ensuring the Service Description is complete

42. 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.”

43. 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 is proposing 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.

44. 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 is seeking stakeholder views on whether 1kW/h is appropriate or whether it should start at 3kW/h.

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4 The Annex to the Determination, paragraph 239
Q3. Do you have any comments in relation to related services that are to be made available?

2.3 Service Levels included in the Service Description

45. 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.

46. The Authority is, therefore, proposing to order 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.

47. In its correspondence with the Authority, Batelco has 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.

48. 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.

49. In summary the service levels the Authority proposes to order 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:

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Target Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Availability for periods free of Covered Failure</td>
<td>99.9%</td>
</tr>
</tbody>
</table>

   c. The following response times and restoration times:

<table>
<thead>
<tr>
<th>Fault Type</th>
<th>Response Time</th>
<th>Restoration Time</th>
<th>Threshold Response Time</th>
<th>Threshold Restoration Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covered Failure</td>
<td>10 minutes</td>
<td>3 hours</td>
<td>15 minutes</td>
<td>5 hours</td>
</tr>
</tbody>
</table>

50. 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.

51. 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 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

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

2.4 Other terms and conditions

52. 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.

53. 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).

54. 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.

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

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 effect the Existing RO and the provision of other services by Batelco under the Existing RO? Please explain and justify your response.

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.
3 The proposed price terms

55. 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.

56. 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.

57. 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. As such, the Authority has also sought to ensure that Batelco is able to earn a rate of return on its historic investment that is sufficient to support future investment. 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

58. 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.

59. 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 charges vary according to the capacity offered to the Access Seeker. The
Draft Order on the Reference Offer of Batelco
Annex A – Order Legal Basis and Reasoning

charges Batelco proposed in its submission of 23 May 2021, by capacity, are set out in Table 1, below.5

Table 1: Batelco cross connect charge proposal

<table>
<thead>
<tr>
<th>Service capacity</th>
<th>One off charge (BHD)</th>
<th>Recurring charge (BHD per month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM1</td>
<td>1,234</td>
<td>192</td>
</tr>
<tr>
<td>STM4</td>
<td>1,234</td>
<td>561</td>
</tr>
<tr>
<td>STM16</td>
<td>1,234</td>
<td>2,038</td>
</tr>
<tr>
<td>1Gbps</td>
<td>1,005</td>
<td>863</td>
</tr>
<tr>
<td>10Gbps</td>
<td>2,488</td>
<td>7,944</td>
</tr>
<tr>
<td>100Gbps</td>
<td>63,102</td>
<td>78,824</td>
</tr>
</tbody>
</table>

Source: Batelco, GCL/79/21

60. 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 has already reflected, in its revised charges, a concern raised by the Authority (and hence which matters have not been the cause of the changes between Batelco’s price proposal of 23 May 2021 and the price terms set out in this draft Order).6

61. 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, 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.

62. 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

63. 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:

---

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

6 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 previously raised with Batelco all of the points set out in this draft Order.
• Capital expenses on assets related to cable landing stations and submarine cables;
• Operating expenses related to maintaining these cable landing stations and submarine cables; and
• Mark-ups for overheads costs and profit margins.

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

Table 2: Batelco capital expenses inputs

<table>
<thead>
<tr>
<th>Cost element</th>
<th>Capital expenses (BHD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FALCON</strong></td>
<td></td>
</tr>
<tr>
<td>Submarine Build &amp; Equipment</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td><strong>FOG</strong></td>
<td></td>
</tr>
<tr>
<td>Building</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>Fronthaul ducting and transmission</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>Submarine Build</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>Submarine Equipment</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>Building</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td><strong>GBI</strong></td>
<td></td>
</tr>
<tr>
<td>Building</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>Ducting and Transmission</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>Ducting and Fiber</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>Submarine Build</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>Submarine Equipment</td>
<td>[X&lt;]</td>
</tr>
</tbody>
</table>

Source: Batelco, GCL/79/21

65. 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.

66. 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

<table>
<thead>
<tr>
<th>Submarine cable</th>
<th>Operating expenses (BHD per year)</th>
<th>Un-attributed / overhead costs (BHD per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALCON</td>
<td>[X&lt;]</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>FOG</td>
<td>[X&lt;]</td>
<td>[X&lt;]</td>
</tr>
<tr>
<td>GBI</td>
<td>[X&lt;]</td>
<td>[X&lt;]</td>
</tr>
</tbody>
</table>

Source: Batelco, GCL/79/21
67. 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 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

<table>
<thead>
<tr>
<th>Port capacity</th>
<th>Total costs (BHD per port)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM1 / STM4 / STM16</td>
<td>[X]</td>
</tr>
<tr>
<td>1Gbps</td>
<td>[X]</td>
</tr>
<tr>
<td>10Gbps</td>
<td>[X]</td>
</tr>
<tr>
<td>100Gbps</td>
<td>[X]</td>
</tr>
</tbody>
</table>

Source: Batelco, GCL/79/21

3.3 Batelco’s approach to pricing the cross connect service

68. 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

69. 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.

70. 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.

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

72. 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

73. 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 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[greater than][less than] 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

<table>
<thead>
<tr>
<th>Submarine cable</th>
<th>Capacity used for calculating unit costs (STM1s)</th>
<th>Unit cost (BHD / STM1 / month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALCON</td>
<td>[greater than][less than]</td>
<td>[greater than][less than]</td>
</tr>
<tr>
<td>FOG</td>
<td>[greater than][less than]</td>
<td>[greater than][less than]</td>
</tr>
<tr>
<td>GBI</td>
<td>[greater than][less than]</td>
<td>[greater than][less than]</td>
</tr>
</tbody>
</table>

Source: Batelco, GCL/79/21

74. 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

75. 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%.

76. 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

77. 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.

78. 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.

79. 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.

80. 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.

81. 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.
82. 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. 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.

83. 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 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.

84. The adjusted capital expenses for each cable landing station, reflecting these additional adjustments made by the Authority, are set out in Table 6.

85. 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

<table>
<thead>
<tr>
<th>Cost element</th>
<th>Capital expenses (BHD)</th>
<th>Asset lifetime (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FALCON</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td>Fronthaul ducting and transmission</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td>Submarine Build</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td>Submarine Equipment</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td><strong>FOG</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td>Fronthaul ducting and transmission</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td>Submarine Build</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td>Submarine Equipment</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td><strong>GBI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building</td>
<td>[X]</td>
<td>[X]</td>
</tr>
<tr>
<td>Fronthaul ducting and transmission</td>
<td>[X]</td>
<td>[X]</td>
</tr>
</tbody>
</table>

---

7 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.
Submarine Build

Submarine Equipment

Source: TRA based on Batelco

86. 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

87. 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.

88. 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)

<table>
<thead>
<tr>
<th>Cost element</th>
<th>Total annual costs (BHD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FALCON</strong></td>
<td></td>
</tr>
</tbody>
</table>
3.4.3 The Authority’s review of Batelco’s approach to calculate unit costs and prices

89. 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

<table>
<thead>
<tr>
<th>Submarine cable</th>
<th>Capacity used for calculating unit costs (STM1s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALCON</td>
<td>[X]</td>
</tr>
<tr>
<td>FOG</td>
<td>[X]</td>
</tr>
<tr>
<td>GBI</td>
<td>[X]</td>
</tr>
</tbody>
</table>

Source: TRA based on Batelco
90. 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.

91. 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. 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.

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?

92. 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 Batelco and BNet. 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

---

8 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.

9 MCD/08/16/066

10 LAD 0619 178
c. The uncertainty with regard to the take-up of the cross connect service and the cost of dealing with this wholesale demand.

93. 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 wishes to consult on whether this mark-up remains 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?**

94. The Authority has further 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

<table>
<thead>
<tr>
<th>Service capacity</th>
<th>One off charge (BHD)</th>
<th>Passive cross connect charge (BHD per month)</th>
<th>Active cross connect charge (BHD per month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM1</td>
<td>226</td>
<td>41</td>
<td>38</td>
</tr>
<tr>
<td>STM4</td>
<td>226</td>
<td>41</td>
<td>117</td>
</tr>
<tr>
<td>STM16</td>
<td>226</td>
<td>41</td>
<td>429</td>
</tr>
<tr>
<td>1Gbps</td>
<td>226</td>
<td>41</td>
<td>178</td>
</tr>
<tr>
<td>10Gbps</td>
<td>226</td>
<td>41</td>
<td>1,696</td>
</tr>
<tr>
<td>100Gbps</td>
<td>226</td>
<td>41</td>
<td>17,457</td>
</tr>
</tbody>
</table>

Source: TRA based on Batelco

95. Having compared the charges for hosting services against similar services available from BNET, (Co-mingling and dedicated rack facility services)\(^{11}\) 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 87 results in a revised charge of BHD 496 per rack per month. The Authority thus intends to require Batelco to amend its proposed hosting charge to BHD 496 per rack per month.

\(^{11}\) LAD 0619 178
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.
Annex B – Revised 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 (FOG);

(ii) Gulf Bridge International (GBI); and

(iii) Falcon.

(each a "Cable Landing Station") 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:

(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 additional ancillary support services set out in this Schedule.

2. DEFINITIONS

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

Access Provider means Batelco.

Access Seeker means the Licensed Operator holding the necessary licenses, as set out under clause 1 of this Schedule 1.

Availability Rebate Cap means 20% of the monthly Charges for the ICLSA Service applicable to the ICLSC.

Batelco IC PoP means the Batelco International Connectivity Point of Presence active equipment connecting the Batelco IC PoP ODF to the International Access ODF.
Batelco IC PoP ODF means the ODF connecting the National Access ODF to the Batelco IC PoP.

BNET PoP means the Bahrain Network (BNET) Point of Presence equipment installed in a CLS.

CLS means Cable Landing Station.

Covered Failure means an actual or suspected fault or failure in one of the ICLSA Service components to the extent that renders the ICLSA service unavailable.

Delivery Lead Time means the delivery lead time described in paragraph 7.3.

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 the Annex 1 of this Service Description Order.

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

International Access ODF means the ODF connecting the Batelco IC PoP to the submarine SLTE or submarine SLTE ODF 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 National Access ODF to the International Point of Handover international boundary of the territorial water of the Kingdom of Bahrain.

International Cable Landing Station Hosting ("ICLSH") means a co-location space, as set out under clause 3.2 of this Schedule, designated at the CLS to be occupied by 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.

a LOA means a 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 quarter (being three (3) consecutive months).

National Access ODF mean the ODF connecting the Domestic Point of Handover at Access Seeker equipment part of the ICLSH to the Batelco IC PoP ODF.

ODF means optical distribution frame.

Point of Handover has the meaning given to it in paragraph 7.1(d).

PoP mean Point of Presence.

Service Commencement Date for each Order for the ICLSA Service shall be the date identified in accordance with paragraph clause 7.4.

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 as per the initial term mentioned in the Order until terminated.

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 IFCICLS A 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 paragraph clause 7.5(c).

Threshold Restoration Time means, in relation to a Covered Failure, the threshold restoration times set out in paragraph clause 7.5(c).

Total Service Credit Cap means, in relation to any month, 40% of the monthly Charges for the ICLSA Service.

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 7-5 subject to this clause 3 and clause 6 of this Service Description (which shall take precedence) in accordance with the Order set out in Annex 2.

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 under this Service.

3.4 The Access Seeker’s personnel must adhere to all of Batelco’s the Access Provider’s reasonable written security and site regulations instructions and procedures relating to the Direct ICLSH this Service, which include including Access Provider’s site and security regulations, as more fully set out in Schedule 7 The Facility Access Technical Manual. Nothing in any guidance, instructions or policy can be taken to mean that the Access Provider assumes any risk or responsibility in relation to the Access Seeker’s service, Equipment or personnel. An indicative summary of the current security procedures and policies is set out in [Schedule 7?]. Enquiries about the details of any policy or procedure should be directed to the Access Seeker’s account manager at the Access Provider.

3.5 The Access Provider will provide a safe working environment for any Access Seeker personnel for the Direct ICLSH. The Access Seeker shall indemnify the Access Provider against all claims, charges, costs or expenses in any way relating to injury to or death of any Access Seeker personnel at or in the environs of the Direct ICLSH, and against all loss of or damage to the Access Seeker’s Equipment or any other Access Provider’s Equipment at the ICLSH in any way connected with the Access Seeker’s use of 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. Access Seeker may enter the Direct ICLSH solely for the purposes of installing, inspecting, maintaining, adjusting, repairing, altering, replacing or removing Access Seeker Equipment within the Direct ICLSH in accordance with the agreement.

3.5 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. Where the Access Provider’s policies require supervision at the ICLSH this will be at the Access Seeker’s costs and risk.

3.63.7 Any Domestic Point of Handover for connectivity terminating to the Access Seeker’s PoP equipment located under the Direct ICLSH Service should terminate to the Access Seeker’s PoP at the designated area. Such Any other connection with a Domestic Point of Handover can be only coming to the CLS through BNet’s network or BNet’s PoP located at the CLS.

3.7.8 The ICLSH Service does not provide any storage facilities to the Access Seeker.

4. ICLSH RELATED SERVICES

4.1 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 Authority, 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 1kW/h (which can be increased in increments of 1kW/h, subject to additional charges as set out in Batelco’s general RO) and apply the same interruption and back-up protection to this power supply as apply 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);
(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 equipment/patch panel to the National Access ODF.

5. INTERNATIONAL CABLE LANDING STATION CONNECTION (ICLSC) SERVICE

5.1 The Access Provider shall provide the ICLSC Service using the order procedure specified in Schedule 7-5 and in accordance with the Order set out in Annex 2 subject to this clause 5 and clause 6.5 of this Service Description (which shall take precedence).

5.2 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 6.3 (a) of this Schedule.

5.3 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 6.3 (b) of this Schedule.

6. GENERAL SERVICE TERMS The Access Seeker acknowledges:

(a) A Domestic Point of Handover in the CLS ICLS is required for ordering and maintain the ICLSCA Service components of the Service. If either party terminates any of the Access Seeker ceases to have a
Final Order on the Reference Offer of Batelco
Annex B – Revised Service Description

Domestic Point of Handover in the CLS permitted form ICLSH service, then all elements of the ICLSA service will automatically be deemed terminated;

(a) The ICLSA Service comprises the ICLSH, ICLSC and additional support services set out in this Schedule;

(b) If The Access Seeker Any missing fails to provide details or documents required by the Access Provider this could lead into 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 Body Terms of this Reference Offer. 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;

(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 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 The [Domestic] Point of Handover for the [service] is a port on the Access Seeker’s Equipment in the rack/cabinet located in the ICLSH a port.

6.3.2 Delivery of the ICLSA shall be carried out as per the KPIs set out in the Body Terms.

6.4.3 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. The LoA shall include should give a high level indication of the type of service that the Access Seeker has purchased from the submarine cable owner, including but not limited to, the interface type and capacity.

6.4 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 Clause 6.1 of the Body Terms (as amended by Annex 3 (Special Conditions) 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:

<table>
<thead>
<tr>
<th>Number of Business Days after expiration of the applicable Delivery Lead Time</th>
<th>Rebate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–5</td>
<td>5 Service Credits</td>
</tr>
<tr>
<td>5–10</td>
<td>10 Service Credits</td>
</tr>
<tr>
<td>More than 10 Business days</td>
<td>20 Service Credits</td>
</tr>
</tbody>
</table>

6.5 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 Business 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 Business 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 6.4.(a).

(c) The Access Provider can be available (if requested by the Access Seeker giving a sufficient notice period), during the 2 Business 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, the Access Provider standard rates would apply.

(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 of the Access Provider does not own or effectively control it, the Access Provider shall start the billing of the ICLSC service as per the Service Commencement Date.

6.6 Performance and uptime:

(a) The Target Availability for the ICLSA–ICLSC shall be as set out below, including alongside the Service Rebate regime that will apply if the relevant Target Availability falls below the stated threshold:

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Target Availability</th>
<th>Service Rebate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Availability for periods free of Covered Failure</td>
<td>99.9%</td>
<td>2 Service Credits per 0.01% or part thereof below the Target Availability but</td>
</tr>
</tbody>
</table>
6.6.7 Fault response and repair

(a) The Access Seeker will as soon as practicable after becoming aware of a Fault with the ICLSCA 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 ICLSCA 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:

<table>
<thead>
<tr>
<th>Fault Type</th>
<th>Response Time</th>
<th>Restoration Time</th>
<th>Threshold Response Time</th>
<th>Threshold Restoration Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covered Failure</td>
<td>10 minutes</td>
<td>3 hours</td>
<td>15 minutes</td>
<td>5 hours</td>
</tr>
</tbody>
</table>

(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:
7. **TERMINATION**

7.1 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.

7.2 The Access Seeker Parties acknowledges that a termination of the Direct ICLSH service shall not automatically trigger a termination of the ICLSC service provided and provisioned by the equipment part of connected to the Direct ICLSH service. And the Access Provider will 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.

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, ICLSC or ICLSH 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) Business 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.
Note: Costs of elements considered in the passive cross connect charge are those attributable on a per line basis. This includes the patch cables between different types of equipment at the landing station. Costs of elements considered in the active cross connect charge are those attributable on a capacity basis. This includes the transmission equipment and shared infrastructure such as the national submarine cable.
Annex 2 – Service Request Form:

[Image of the service request form from Batelco]

This Agreement is made between Batelco and Customer and is governed by Batelco’s Reference Offer of the ICLSA Service.

Request Type: [Select]

Customer Details

Company Name:
Contact Name:
Postal Address:
Phone Number:
Contact e-mail:

Billing Details

Billing Contact:
Billing Address:
Phone Number:
Contact e-mail:

Service Details

Service Type: [Select]
CLID: [Select]
Contract Period: [Select]

Description

Capacity Qty Unit Net MRC NRC

Total amount (in words):

Remain:

Agreement

By signing 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:
Signature:
Name:
Title:
Date:

For and on behalf of Batelco:
Signature:
Name:
Title:
Date:

Customer Initials: ___________ Batelco Initials: ___________
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:**

<table>
<thead>
<tr>
<th>Reference</th>
<th>Special Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clause 3.1 of the Body Terms</td>
<td>To add the following point (c): “Any other terms that has been agreed between the Access Provider and the Access Seeker set out in the Service Request.”</td>
</tr>
<tr>
<td>Clause 6.1 of the Body Terms</td>
<td>To replace the timetable with the following:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Milestone</th>
<th>KPI (Business Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Service Request Acknowledgement</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Service Request Acceptance</td>
<td>+10 (Subject to receiving a complete filled Service Request with accurate details and all relevant documents mentioned in the Service Description)</td>
</tr>
<tr>
<td>3</td>
<td>Raising Orders in the System</td>
<td>+3</td>
</tr>
<tr>
<td>4</td>
<td>Joint Site Survey</td>
<td>3 (If required and after the Access Provider receives a request from the Access Seeker)</td>
</tr>
<tr>
<td>6</td>
<td>Handover the Service</td>
<td>20 (From raising the Service Request in the systems and if no additional physical resources are required) 60 (From raising the Service Request in the systems and if additional physical resources are required)</td>
</tr>
<tr>
<td>7</td>
<td>Confirm Service Acceptance by Licensed Operator</td>
<td>2 (From Service Handover date)</td>
</tr>
<tr>
<td>Clause 7 of the Body Terms</td>
<td>To exclude clause 7 of the Body Terms in its entirety.</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Clause 4 of Schedule 2 (RO Service Request)</td>
<td>To amend clause 4 as follows: “The Requesting Operator shall provide all details required under clauses 6.2, 6.3 and Annex and Annex 2 of Schedule 1 2-9 (Service Description ICLSA). The Requesting Operator’s Service Request must contain.” 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</td>
<td></td>
</tr>
<tr>
<td>Clause 13 of Schedule 2 (RO Service Request)</td>
<td>To add the following clause 13: “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 B.”</td>
<td></td>
</tr>
<tr>
<td>Annex A of Schedule 2 (RO Service Request)</td>
<td>To add the following as See Annex A2: of this Service Description</td>
<td></td>
</tr>
<tr>
<td>Annex B of Schedule 2 (RO Service Request)</td>
<td>To add the following as See Annex B2 of this Service Description:</td>
<td></td>
</tr>
<tr>
<td>Clause 2.1 of Schedule 5 (Ordering and Provisioning)</td>
<td>To replace clause 2.1 with the following: “The Access Provider shall comply with all ICLSA related milestones in accordance with clause 6 of the Body Terms.”</td>
<td></td>
</tr>
<tr>
<td>Clause 3.1 of Schedule 5 (Ordering and Provisioning)</td>
<td>To replace clause 3.1 with the following: “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.” Reference to an Order will be deemed to be reference to a Service Request</td>
<td></td>
</tr>
<tr>
<td>Clause 3.2 of Schedule 5 (Ordering and Provisioning)</td>
<td>To exclude clause 3.2 in its entirety.</td>
<td></td>
</tr>
</tbody>
</table>
| Clause 3.3 of Schedule 5 (Ordering and Provisioning) | To add the following point (i) to clause 3.3:  
“the Order or Service Request form is not properly completed.” |
| Clause 5.1 of Schedule 5 (Ordering and Provisioning) | To amend clause 5.1 as follows:  
“Batelco will advise the Access Seeker of the Implementation Date for fulfillment of an accepted Order in accordance with clause 6 of the Body Terms.” |
| Clause 6.1 of Schedule 5 (Ordering and Provisioning) | To amend clause 6.1 as follows:  
“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.” |
| Clause 2.1 (b) of Schedule 6 (Fault Management) | To replace point (b) with the following:  
“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.” |
| Clause 2.2 of Schedule 6 (Fault Management) | To replace clause 2.2 with the following:  
“Faults will be addressed depending on individual circumstances and shall be categorized into P1 and P2, as follows:  
  a) P1 Faults defined as an outage which results in the Access Seeker being unable to fully utilize the Services; and  
  b) P2 Faults defined as service degradation that does not amount to P1 service incident.” |
<p>| Section 3 of Schedule 6 (Fault Management) | To replace the term “FCC” with “NOC.” |</p>
<table>
<thead>
<tr>
<th>Clause 3.1 of Schedule 6 (Fault Management)</th>
<th>To replace clause 3.1 with the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“The Access Seeker shall report faults directly to Batelco Network Operation Center (NOC) as per the below contact details: Tel: +973 17271172 eFax: +973 17238183 email: <a href="mailto:NOC_BTC@btc.com.bh">NOC_BTC@btc.com.bh</a>”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clause 3.5 of Schedule 6 (Fault Management)</th>
<th>To exclude clause 3.5 in its entirety.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clause 3.6 of Schedule 6 (Fault Management)</th>
<th>To replace clause 3.6 with the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“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.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</th>
<th>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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule 8 (Dictionary and Rules of Interpretation and Construction)</td>
<td>Insert the words “Service Handover” in definition of “Actual RFS Date” as follows: Actual RFS Date means the date on which the OLO receives the RFS Certificate or Service Handover from Batelco.</td>
</tr>
</tbody>
</table>

| Schedule 8 (Dictionary and Rules of Interpretation and Construction) | Add the following new definitions . Cable Landing Station means a cable landing station where international submarine cables are landed with Batelco. Direct ICLSH has the meaning prescribed in Schedule 2 - Service Description 2-9: International Cable Landing Station Access (ICLSA). ICLSA means International Cable Landing Station Access ICLSH means International Cable Landing Station Hosting |
| Schedule 8 (Dictionary and Rules of Interpretation and Construction) | Insert the words “or Service” in definition of “Cancellation Request” as follows:  
**Cancellation Request** means a Service Request for cancelling an existing Connection or Service. |
| Schedule 8 (Dictionary and Rules of Interpretation and Construction) | Delete the words or “third parties” in the definition of **Complex Case** |
| Schedule 8 (Dictionary and Rules of Interpretation and Construction) | Amend the definition of **Facility** as follows:  
Replace sub-paragraph (d) of the definition of Facility with the following:  
*Cable Landing Station or part of Cable Landing Station under an ICLSH service.*  
Add the words or “Direct ICLSH” after the words “Facilities Access” |
| Schedule 8 (Dictionary and Rules of Interpretation and Construction) | Change the defined term **Facilities Access Application** to **Facilities Access or Direct ICLSH Application.** |
| Schedule 8 (Dictionary and Rules of Interpretation and Construction) | Insert the words “and Direct ICLSH” in the first paragraph of the definition of **Facility Access Technical Manual** as follows:  
**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: ... |
| Clause 1.2 of Schedule 9 (Supply Terms) | To add the following point (c):
“Body Terms;” |
---|---|
| Clause 2.2 of Schedule 9 (Supply Terms) | To amend the references under clause 2.2 as follows:
“…unless terminated earlier in accordance with the provision of these Supply Terms or the termination provisions under Schedule 1 2-9.” |
| Clause 15.7 of Schedule 9 (Supply Terms) | To add the following clause 15.7:
“The early termination of the ICLSA Service by the Access Seeker shall also be subject to clause 6.7 of Schedule 1 2-9.” |
Annex 4 – Charges

[to be inserted following completion of the consultation by the Authority on price terms]
Annex C – FALCON and FOG input costs

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.
Annex D – List of acronyms and definitions

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

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

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?

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

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

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.

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.

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.

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 effect the Existing RO and the provision of other services by Batelco under the Existing RO? Please explain and justify your response.

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.

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?

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?

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.