

PUBLIC VERSION

**ORDER No. 2 of 2006**  
**Reference Access Offer Order**

## **Reference Access Offer Order**

An Order issued by the Telecommunications Regulatory Authority on the Reference Access Offer of the Bahrain Telecommunications Company B.S.C. dated 22 March 2006

12 July 2006

**NOTE: This is the non-confidential version of the Order issued to Batelco on 12 July 2006. Parts of this text has been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.**



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**1. Definitions**

Unless otherwise defined in this Order, any word, phrase or expression shall, unless the context so requires, have the meaning given to it in the Telecommunications Law, the Reference Access Offer or the Reference Interconnection Offer and the terms below shall have the following meaning:

**“2003 WACC”** means the nominal WACC for Batelco set out in the determination “Batelco’s Cost of Capital” dated 9 August 2003 (Determination No. 3 of 2003);

**“2004 Audited Accounts”** means Batelco’s audited regulatory accounts for 2004 submitted to the Authority pursuant to the Accounting Separation Regulation and the Accounting Separation Determination;

**“2004 Un-audited Accounts”** means Batelco’s un-audited regulatory accounts for 2004 submitted to the Authority pursuant to the Accounting Separation Regulation and the Accounting Separation Determination;

**“2005 Accounts”** means Batelco’s audited regulatory accounts for 2005 to be submitted to the Authority pursuant to the Accounting Separation Regulation and the Accounting Separation Determination;

**“2005 WACC”** means the nominal WACC for Batelco set out in the determination “Determination of Batelco’s Cost of Capital” dated 20 November 2005 (Determination No. 3 of 2005);

**“Access Regulation”** means the access regulation issued by the Authority on 30 April 2005 (Regulation No. 1 of 2005);

**“Accounting Separation Determination”** means the accounting separation determination to Batelco published by the Authority on 5 February 2005 (Determination No. 2 of 2005);

**“Accounting Separation Regulation”** means the accounting separation regulation issued by the Authority on 2 August 2004 (Regulation No. 2 of 2004);

**“Batelco”** means the Bahrain Telecommunications Company B.S.C.;

**“Draft Order”** means the draft to this Order included in the Notice;

**“Dominance Determination”** means the determination ‘Dominance in Wholesale Markets by Batelco’ published by the Authority on 22 January 2006 (Determination No.1 of 2006);

**“Licensed Operator”** means any Person other than Batelco that has been licensed by the Authority under the Telecommunications Law;

**“Notice”** means the notice dated 31 May 2006 issued by the Authority including a draft version of this Order;

**“Order”** means this Reference Access Offer Order;

**“Reference Access Offer”** means the reference access offer of Batelco dated 22 March 2006;

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**“Reference Interconnection Offer”** means the reference interconnection offer of Batelco dated 15 August 2005;

**“Response”** means the submission dated 2 July 2006 made by Batelco to the Authority is response to the Notice;

**“Telecommunications Law”** means the law promulgated by Legislative Decree No. 48 of 2002;

**“TPR”** means a Batelco tariff proposal request (followed by the Batelco reference number for the request); and

**“WACC”** means weighted average cost of capital.

**2. Introduction**

The Access Regulation issued on 30 April 2005 provides that a telecommunications network operator with dominance in relevant markets must make available a reference access offer. Batelco, being the largest and in respect of most telecommunications service the only telecommunications network operator in the Kingdom of Bahrain, has therefore had pre-warning since that date that subject to the exact terms of any finding of dominance it would be required to produce a reference access offer. Some access products or services were already published by Batelco together with its Reference Interconnection Offer.

The exact terms of findings of dominance were made in the Dominance Determination on 22 January 2006, which, together with the conditions in the Access Regulation, meant Batelco had three (3) months to produce a reference access offer that complied with the terms of the Dominance Determination and Access Regulation.

At no point in either the period from 30 April 2005 or from 22 January 2006 did Batelco seek to obtain any clarification or request a meeting with the Authority to discuss the form or content of a reference access offer.

Batelco submitted its Reference Access Offer on the due date. Since that date the Authority and Batelco have exchanged correspondence on the content of the Reference Access Offer, particularly the tariffs and charges contained in it and the cost information to justify how Batelco came up with those tariffs and charges. As a result of the exchange and as it appeared that the Reference Access Offer as submitted was not fair or reasonable, the Authority decided in exercise of its powers described below to issue Batelco with a Draft Order concerning the Reference Access Offer on 31 May 2006. The Notice covering the Draft Order gave Batelco a detailed explanation of the concerns of the Authority, why it did not consider the Reference Access Offer to be fair or reasonable and allowed the prescribed period in which to respond, and Batelco subsequently submitted its Response on 2 July 2006.

As a result of the Response, Batelco and the Authority exchanged further correspondence and held a meeting to discuss certain aspects of the service descriptions included in the Draft Order. All the relevant correspondence and the meeting are described in the following paragraphs.

As a result of its study of all the information supplied by Batelco in connection with its Reference Access Offer, the Authority has determined that it is appropriate to issue this Order for the reasons set out below.

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**3. Legal Basis**

Whereas:

- 3.1 Batelco provides services pursuant to section 80 of the Telecommunications Law and the Authority granted various licenses to Batelco on 21 June 2003, which were re-issued with corrections required to ensure the licenses complied with the provisions of section 80 of the Telecommunications Law, on 14 June 2005, including a national fixed services license;
- 3.2 although Batelco has a legitimate expectation that the terms of its licenses as re-issued on 14 June 2005 be reviewed to consider appropriate amendments to take into account the reliance it placed between 21 June 2003 and 14 June 2005 on the form of licenses issued to it on 21 June 2003, the Authority is satisfied that no determination included in this Order relies upon license conditions in the correct licenses so as to prejudice Batelco's interests;
- 3.3 section 3(c)(1) of the Telecommunications Law grants the Authority the power to make such regulations, orders and determinations as may be necessary for the implementation of the Telecommunications Law, including determinations in connection with, amongst other things, interconnection, access to the network and its facilities, services tariffs, access to real property and promotion of competition;
- 3.4 section 3(c)(13) of the Telecommunications Law grants the Authority the power to encourage, regulate and facilitate adequate access and interconnection arrangements, including, where necessary, enforcing the sharing by public telecommunications operators of the benefits of facilities and property;
- 3.5 pursuant to its powers under section 57(e) of the Telecommunications Law, which provides, amongst other things, that the Authority may publish regulations in connection with access, including regulations regarding a reference access offer similar to a reference interconnection offer, the Authority published the Access Regulation;
- 3.6 pursuant to the requirement set out at Article 2.1 of the Access Regulation, the Authority found Batelco dominant in certain wholesale markets, as set out in the Dominance Determination;
- 3.7 having been found to be in a dominant position, as set out in the Dominance Determination, Batelco was required by Articles 3.3 and 4 of the Access Regulation to make available a reference access offer;
- 3.8 Batelco submitted the Reference Access Offer to the Authority for approval, in accordance with Article 5.1 of the Access Regulations;
- 3.9 Batelco has submitted further information on its costs and charging principles to enable the Authority to understand the basis for the tariffs included in the Reference Access Offer, as detailed in this Order;
- 3.10 other than as detailed in this Order, the Authority has used costs as set out in the 2004 Un-audited Accounts for tariffs determined in this Order by the Authority;

- 3.11 although the Authority has received Batelco's 2004 Audited Accounts, the Authority notes these accounts contain caveats made by the auditors in connection with, inter alia, the basis upon which management estimates included in the 2004 Audited Accounts are evidenced or not evidenced by supporting documentation. The Authority needs to form a view on the materiality of the auditors' findings regarding management estimates and the lack of supporting data. The Authority wrote to Batelco on 4 July 2006 (ERU/0706/158) stating that the Authority specifically requires information relating to the auditors' concerns;
- 3.12 pursuant to Article 5.3 of the Access Regulation, which provides that where the Authority determines that any of the terms and conditions or tariffs contained in a Reference Access Offer submitted to it are not fair, reasonable and non-discriminatory, it will issue an order specifying the terms and conditions that it does not approve and shall state the terms and conditions that shall apply in a notice stating in writing the order to be issued, the Authority issued the Notice, which including a draft order in substantially the terms of this Order;
- 3.13 Batelco sets out in its Response that it considers that the Authority must have a positive reason for, and has the burden of proof for, rejecting any tariffs or terms as being unreasonable, unfair or discriminatory. What the Authority is required to do is to decide whether it considers (قدرت الهيئة) (being the relevant verb set out in section 57(e) of the Telecommunications Law) or determines (قررت) (being the relevant verb set out in Article 5.3 of the Access Regulation) that any tariffs or terms are unreasonable, unfair or discriminatory. When doing so, the Authority must:
- (a) pursuant to its obligations under section 3(a) of the Telecommunications Law, act reasonably and in a non-discriminatory manner and fully explain its consideration or determination that any tariffs or terms are unreasonable, unfair or discriminatory in order to comply with its obligation under the same provision to exercise its powers in a transparent manner; and
  - (b) pursuant to its obligations under section 3(b) of the Telecommunications Law, ensure that in considering or determining that any terms or tariffs are unreasonable, unfair or discriminatory, its consideration or determination is best calculated to:
    - (i) protect the interests of subscribers or users as set out in section 3(b)1; and
    - (ii) promote effective and fair competition as set out in section 3(b)2;
- 3.14 the Authority is satisfied that in carrying out its duties and exercising its powers under the Telecommunications Law and the Access Regulation, its consideration or determination that any tariffs or terms are unreasonable, unfair or discriminatory as set out in this Order:
- (a) are made in a reasonable and in a non-discriminatory manner in compliance with section 3(a) of the Telecommunications Law, as demonstrated by the reasoning and explanations included in this Order;

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- (b) are fully explained and reasoned in this Order in compliance with the requirements for transparency in compliance with section 3(a) of the Telecommunications Law;
- (c) are made in the knowledge or with the understanding that tariffs or terms that it considers or determines are unreasonable, unfair or discriminatory would prejudice the interests of subscribers or users in that:
  - (i) tariffs that it considers or determines are unreasonable, unfair or discriminatory would, if approved by the Authority, lead to subscribers or users being charged higher tariffs than the Authority is satisfied would be fair or reasonable for the relevant service;
  - (ii) tariffs or terms that it considers or determines are unreasonable, unfair or discriminatory would, if approved by the Authority, result in a low or no take up of access services by Licensed Operators, with the result that:
    - (A) there would be a reduced availability and provision of alternative services to Batelco's own retail services, prejudicing subscribers' or users' interests in there being wide availability and provision of alternative services;
    - (B) there would be less competition to Batelco in the provision of retail services to subscribers or users, or, where other Licensed Operators accepted terms and tariffs that were unreasonable, unfair or discriminatory, Batelco would be in a position to compete with such Licensed Operators unfairly; and
    - (C) prices to end customers would not get close to costs; and
  - (iii) quality of service related terms that it considers or determines are unreasonable, unfair or discriminatory would, if approved by the Authority, result in an access regime that would be prejudicial to subscribers' or users' interests in having reasonable quality of services,

so that its actions in considering or determining any tariffs or terms are unreasonable, unfair or discriminatory are in compliance with its obligations under section 3(b) of the Telecommunications Law ;

- 3.15 in approving cost information or cost-based pricing for tariffs the Authority implicitly accepts that Batelco's tariffs included in the Reference Access Offer can take into account any asymmetric risks as these are taken into account in the determination of Batelco's WACC, which the Authority accepts can be included in any cost information or cost-based pricing and that in particular the determination setting the 2005 WACC stated that:

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- (a) “the [Authority] has taken into account the current situation facing Batelco with regard to tariffs for call origination services, which appear not to fully reflect costs”; and
  - (b) “The [Authority is mindful of the importance of [asymmetric risk] in setting the cost of capital, and is satisfied that the determined cost of capital adequately deals with the concerns that have been raised”;
- 3.16 the terms of Article 5.3 of the Access Regulation do not prevent Batelco from resubmitting a reference access offer at any time, so that there is nothing to prevent Batelco from submitting a reference access offer with tariffs based upon costs included in the 2005 Accounts and subject to the 2005 WACC, which takes into account asymmetric risks and elements of a possible access deficit;
- 3.17 the Authority is satisfied that the fact that tariffs and terms included in the Reference Access Offer:
- (a) have been accepted by other Licensed Operators prior to any approval of the Reference Access Offer by the Authority; or
  - (b) provide an ability for other Licensed Operators to make a margin on the tariffs included in the Reference Access Offer and retail tariffs offered by Batelco to subscribers or users for the relevant equivalent retail services;
- is not conclusive evidence that such tariffs and terms are fair and reasonable, given that the dynamics of a market in which such tariffs and terms are offered by a dominant services provider in the relevant market or markets mean that such Licensed Operators may accept terms and tariffs that are unfair and unreasonable for valid commercial reasons, even though such acceptance may compromise those Licensed Operators’ ability to provide effective competition in the longer term;
- 3.18 the Authority is satisfied that in determining tariffs based upon Batelco’s costs derived from the 2004 Un-audited Accounts, it is fair, reasonable and non-discriminatory to apply the relevant WACC that applied for the 2004 financial year to those costs, being the 2003 WACC, particularly as in future reference access offers based upon the 2005 Accounts, the Authority will apply the 2005 WACC, which if Batelco wishes it can incorporate into a revised reference access offer at any time;
- 3.19 no provision of the Telecommunications Law or the Access Regulation requires the Authority to take into account any access deficit in the determination of tariffs for access services included in the Reference Access Offer and the Authority is not aware of any other regulatory authority that has addressed any access deficit by way of a surcharge on access services;
- 3.20 no provision of the Telecommunications Law or the Access Regulation, other than section 26(a) of the Telecommunications Law, gives the Authority the ability to take into account the domicile of any Licensed Operator, so that provided the Authority’s actions are otherwise compliant with the Telecommunications Law, the possibility outlined in Batelco’s Response that multi-national companies may choose not to invest in infrastructure in Bahrain but only offer services as a result of their accepting services included in the

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- Reference Access Offer and export any profits made from such service provision rather than invest those profits in Bahrain infrastructure, is not a factor that the Authority is entitled to apply in any consideration or determination on the fairness or reasonableness of tariffs and terms in the Reference Access Offer and in any event there is currently no restriction on Batelco to control what it does with its profits, some of which are already invested overseas (Jordan, Kuwait and Egypt);
- 3.21 the Authority is not satisfied that a fair and reasonable tariff contains an access deficit component – the Authority has not as yet established if an access deficit exists and if so, the quantum of this deficit and how it should be most efficiently funded. In this context, the Authority is not satisfied that it is appropriate for Batelco to be defining, measuring and funding an unproven or even undetermined access deficit through a surcharge on access tariffs;
- 3.22 the Authority is satisfied that in considering or determining the reasonableness or otherwise of tariffs in the Reference Access Offer, it has taken into account the increased infrastructure competition provided by the other Licensed Operators detailed by Batelco in its Response, to the extent that this is relevant, and notes that as the Authority holds gross annual turnover information supplied to the Authority pursuant to its determination of annual license fees under section 18(a) of the Telecommunications Law and other regulatory information obtained by the Authority from Licensed Operators, the Authority is able to assess accurately the relevant financial strength and market shares of Batelco and the Licensed Operators;
- 3.23 although in Batelco’s Response it discusses and discounts risks associated with deploying network infrastructure from being a barrier to entry to new market entrants, Batelco has not acknowledged that a significant barrier to entry in the Bahrain market is the current inability of new market entrants wishing to deploy fixed line networks from participating in the access to public land and public works co-ordination system deployed by the Central Planning Unit of the Ministry of Housing and Works and that therefore any alleged adverse impact of the Authority’s determined tariffs on encouraging investment in new (fixed line) infrastructure is not relevant, given that new market entrants are not currently capable of making such investments;
- 3.24 in jurisdictions described by Batelco as permitting a retail minus approach to bitstream and other access pricing (the UK and New Zealand), the relevant incumbent dominant network operators are subject to significant competition from carrier pre-selection and DSL access operators as well as competition from other national telecommunications network operators including cable companies, which is not the case in the Bahrain market, so that it is fair and reasonable for regulatory decisions that adopt retail minus access pricing made by Oftel/Ofcom or the New Zealand Commerce Commission not to be followed by the Authority, given the different state of the Bahrain telecommunications market;
- 3.25 having taken into account Batelco’s Response, which was submitted in writing to the Authority in response to the Notice issued pursuant to Article 5.3 of the Access Regulations,

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the Authority has decided to issue this Order to determine the terms and tariffs of the Reference Access Offer which it is satisfied are not fair, reasonable or non-discriminatory.

**4. Reference Access Offer Terms**

The Authority's reasons for ordering changes to the terms of the Reference Access Offer are as follows:

**4.1 Reference Access Offer — Service Descriptions**

**(a) General Comments**

The Authority is satisfied that for any service description to be fair, reasonable and non-discriminatory:

- (i) an express pre-condition to enter into a Supply Agreement is unnecessary, given that service descriptions are themselves part of a reference access offer, which, once agreed, either form part of a Supply Agreement from the date of the agreement or are incorporated into the Supply Agreement upon Batelco's acceptance of the Licensed Operator's request for the relevant service – the Authority is satisfied that the inclusion of such a pre-condition in a service description implies that the provision of the relevant service is dependent upon the un-negotiated acceptance of the Access Seeker of Batelco's reference access offer, which implication would be unfair to the Access Seeker, given the purpose of the Reference Access Offer, and unreasonable;
- (ii) it must include service levels or minimum standards of care for the services to be provided by Batelco, as there are no consumer protection provisions in the Telecommunications Law or other applicable law that ensure by way of statutory implied terms or otherwise a minimum standard of care for the provision of services in commercial contracts – the Authority is satisfied that:
  - (A) having no minimum standard of care is both unfair and unreasonable;
  - (B) although Batelco in its Response objected to the Authority's requirement for service levels **or** minimum standards of care, the Response does not detail how any particular service level or minimum standard of care provisions set out in the Draft Order can be considered to be unfair or unreasonable so as to require the Authority to review its position set out in the Notice; and
  - (C) the Authority's determination that Batelco's maintenance and support services must be provided to at least the same service levels or standards of care as those services are provided by Batelco to itself is necessary to ensure

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that the services provided by Batelco are non-discriminatory;

- (iii) Batelco must be required to provide expressly maintenance and support services in respect of the relevant network elements to which access is being provided – the Authority is satisfied that Schedule 6 (Fault Management) of the Reference Access Offer only describes the fault management process to be adopted by both parties, including provisions to describe categories of fault, response time, restoration time and verification time; Schedule 6 does not contain any express obligation on any party to carry out maintenance or support services and does not include any service levels or minimum standards of care obligations;
- (iv) any required form of forecast must be reasonable – the Authority acknowledges the arguments set out in the Response that in determining what is reasonable may require a form that places a significant burden on the Access Seeker, but that such a burden may be warranted, given the importance to both parties of having as accurate a forecast as practically and reasonably possible;
- (v) it must not contain any restriction on resale – the Authority is satisfied that:
  - (A) a restriction on resale can in certain cases amount to anti-competitive behavior for the purposes of section 65 of the Telecommunications Law in that a refusal to supply by a dominant operator (Batelco being found to be dominant in the Dominance Determination) may amount to an abuse of a dominant position;
  - (B) the scope of the conditions in relevant licenses relating to the provision of services for resale in the corrected licenses re-issued on 14 June 2005 relate to requests from Licensed Operators for “licensed services” (as defined in the relevant licenses) for the provision of “resale services” (as defined in the licenses), which definition of “licensed services” the Authority is satisfied does not include access services; and
  - (C) no objective justification has been included in the Response for any restriction on resale terms in any service description that demonstrates that the inclusion of a restriction on resale in any service description is fair and reasonable, but the Authority observes that its retention of a restriction on resale term in its proposed Bitstream Service pointed out in the Response, which restriction was derived from other Batelco access service descriptions, was an administrative error on the Authority’s part and not an indication that the Authority accepted restriction

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on resale terms, notwithstanding its preliminary ruling in the Notice that service descriptions must not contain restrictions on resale;

- (vi) all indemnities should be subject to the indemnified party taking all reasonable steps to mitigate the losses that it wishes to recover under the indemnities – the Authority is satisfied that this is a standard qualification made in large-scale commercial agreements between parties with equivalent bargaining power where indemnities are accepted in place of warranties, and that permitting one dominant party who is the beneficiary of the majority of any indemnities not to have an obligation to mitigate, would be unfair; and
- (vii) warranties demanded by Batelco should only be permitted where breach of any of them puts Batelco at a real risk of loss – the Authority is satisfied that the example of a breach of a warranty leading to the other party being liable to prosecution set out in Batelco’s Response is an example of a warranty protecting against a real risk of loss.

In the general comments included in the Draft Order, the Authority stated that Batelco must not make an Access Seeker’s license obligation the subject of a contractual obligation, as the Access Provider via the Authority has sufficient remedies under the Telecommunications Law to ensure that the Access Seeker complies with its legal obligations. The Authority was satisfied by the argument of Batelco in its Response and accepts that any assessment of the reasonableness or fairness of including a license obligation as a contractual obligation in the Reference Access Offer must be considered on a case by case basis and on a non-discriminatory basis as between Batelco and the other Licensed Operators.

In the general comments included in the Draft Order, the Authority stated that the Reference Access Offer should make a clear distinction between warranties about a state of affairs at a fixed date and undertakings as to future and continuing conduct, with the intention that parties to the subsequent Supply Agreement should be clear which terms and conditions are technically warranties, in that any breach of them leads to a claim for damages only, or contractual undertakings or conditions, whose breach by one party may entitle the other party to repudiate the Supply Agreement. Having taken into consideration the Response, the Authority is satisfied that no such requirement is appropriate and has removed the same from this Order.

(b) **Carrier Pre-Selection Access Service**

In addition to the amendments made to take account of the Authority’s general comments in sub-paragraph (a) above, the Authority makes the following determinations on the Carrier Pre-Selection Access Service (the “**CPSAS**”):

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(i) **Paragraph 1**

The Authority is satisfied that to be fair and reasonable all pre-conditions for the provision of the CPSAS should be included in the opening paragraph of the service description to make clear to Access Seekers what the pre-conditions for the service are. Consequently, the paragraphs commencing “Availability:” and “Traffic:” should be moved into Paragraph 1.

(ii) **Paragraphs 2 and 3**

The Authority is satisfied that to be fair and reasonable to Access Seekers the CPSAS should be made expressly subject to the Code of Practice on Carrier Pre-Selection issued by the Authority on 29 November 2005, but notes that as explained in Batelco’s Response, this should only apply to the extent that the Code of Practice is consistent with the Regulation (as defined in the CPSAS service description).

The Authority is not satisfied that there should be implied pre-conditions included in any definition of End User or customer for the CPSAS – to be fair to Licensed Operators all pre-conditions should be clearly identified and included in the opening paragraph to the service description. Therefore the definition of “CPS Customer” should be amended accordingly, particularly as the phrase “good standing” has no objective meaning to be fair and reasonable.

The Authority is satisfied that as there is no regulatory or commercial impact on Batelco if the Access Seeker does not comply with its interception obligations under the Telecommunications Law or its relevant license, it is unfair and unreasonable for the Access Seeker’s obligations under the Telecommunications Law or its license to be included as contractual obligations to Batelco. Any such failures will be dealt with by the Authority as breaches of the Telecommunications Law or the Access Seeker’s license, as appropriate.

(iii) **Annexure 2**

The Authority is satisfied that the terms of the Carrier Pre-Selection Regulation dated 13 June 2004 (Regulation No. 1 of 2004) permit the exclusion of special and premium rate services and calls *from* mobile networks but do not require the exclusion of calls *to* mobile networks (Article 3.7, which, given the inclusion of the phrase “but is not limited to” in Article 3.4, is consistent with Article 3.4). The Authority is not satisfied that it is fair and reasonable to exclude calls *to* mobile networks from CPSAS, as there is no difference in cost to Batelco of originating fixed or mobile calls for the purpose of the CPSAS. The Authority is satisfied that as the Response has not disagreed with this statement and has not included any justification on costs or

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technical grounds for the exclusion of fixed to mobile calls in the CPSAS, that this type of call should be included in the CPSAS. The Authority is satisfied that it is not the role of the Authority as a regulator to investigate the costs of system development and the implementation of fixed to mobile telephone calls in a carrier pre-select service; if the costs of system development and the implementation are such that the inclusion of fixed to mobile telephone calls is unfair and unreasonable, then it is for Batelco to make the case. It has not done so in its Response.

Whilst the Authority accepts, as set out in the Response, that in the tariff approval dated 20 September 2005 (Reference ERU/0905/175) the Authority approved an earlier version of the CPSAS service description that excluded fixed to mobile telephone calls, it had put Batelco on notice that this was not the permanent position of the Authority. In the Authority's letter discussing the request for approval of the earlier version of the CPSAS service description, dated 5 September 2005 (Reference ERU/0905/166), the Authority stated:

“Batelco should also note that the [Authority] reserves its position on the inclusion of calls from fixed phones to mobile phones within the CPS scheme. For the time being such calls are excluded from the CPS scheme.”

The Authority is therefore satisfied that it has not given Batelco a legitimate expectation that the question of the exclusion of fixed to mobile telephone calls was a settled matter.

In addition, the Authority is satisfied that even if any services were previously approved by the Authority in accordance with the tariff conditions contained in the relevant license(s), such approvals do not restrict the Authority in the exercise of its duties or powers under the Telecommunications Law or Access Regulation, particularly as the grounds upon which it can disapprove tariffs or terms of services under the relevant tariff conditions in Batelco's licenses are more limited than those that exist in section 57 of the Telecommunications Law or Article 5 of the Access Regulation.

(c) **Customer Access Tail (CAT) Service**

In addition to the amendments made to take account of the Authority's general findings in sub-paragraph (a) above, the Authority has made the following determinations concerning the CAT Service:

(i) **Paragraph 2 – “End User”**

The Authority is satisfied that the CAT Service must be available for residential premises as well as business premises as Batelco must not discriminate between types of user without objective justification. The Authority is satisfied that none of the reasons

given by Batelco in its Response for the CAT Service having restricted availability objectively justify the exclusion of the provision of this service to residential premises.

(ii) **Paragraph 3.2A**

The Authority acknowledges that the availability of CATs will depend upon physical constraints, so that it is fair and reasonable to provide that the service will be subject to availability. However, the Authority is satisfied that a transparent means needs to be developed to handle multiple requests for CAT Services with respect to any particular CAT, to ensure non-discrimination in the determination of whether there is availability for Batelco to provide any CAT Service. The Authority therefore considers that it is fair and reasonable for a transparent Priority Policy to be adopted for the handling of such multiple requests (renamed from the term "Contention Policy", as set out in the Notice, as Batelco requested in a meeting on 6 July 2006 that the word "contention" be reserved for use in its technical sense for IP networks). The Authority is satisfied that the question of whether there is availability is not, as implied by Batelco in its Response, one that has a simple "Yes/No" answer, particularly as upstream or downstream network elements that may be available at the time of any service request may be considered by Batelco to be required for the provision of other services, including by or to itself.

In its Response, Batelco stated in connection with other services that it considered the additional requirement to have a priority policy approved by the Authority to be an unreasonable regulatory burden. The Authority is satisfied that it is not appropriate to require Batelco to obtain the Authority's approval for contention or priority policies. In any event, if there is a dispute between licensees then this can in due time be deferred to the Authority.

(iii) **Paragraph 3.4(b)**

Whilst the Authority has no objection to Batelco levying liquidated damages for early termination of a CAT Service, the Authority is satisfied that for the liability on the Access Seeker to pay any damages to be fair and reasonable, Batelco should have demonstrated that it has used its reasonable endeavors to mitigate the loss concerned. Whilst the Authority is satisfied that the Response does not include any objective reasons for the Authority to remove the requirement for mitigation from this Order, the Authority is satisfied that the terms it was minded to determine as set out in the Draft Order were not appropriate and as such these have been amended in this Order.

(iv) **Paragraph 4 (e)**

The Authority is satisfied that additional charges for availability should only be liable in exceptional and explicit circumstances to be fair and reasonable.

As a result of comments in the Response concerning the likely volume of CAT Service requests, the Authority is satisfied that its determination regarding forecast charges included in the Draft Order are no longer necessary. However, the Authority hereby puts Batelco on notice that if a significant market in CAT Services develops, the Authority is minded to make Batelco's right to levy charges under paragraph 4(d) subject to an equivalent obligation to pay liquidated damages to Access Seekers in the event that it is unable to fulfill forecast Orders.

(d) **International Private Leased Circuit Service/Local Leased Circuit for Other Licensed Operator**

In addition to the amendments made to take account of the Authority's general findings in sub-paragraph (a) above, the Authority makes the following determinations concerning Paragraph 3.2 of the International Private Leased Circuit and Local Leased Circuit Services.

The Authority acknowledges that the availability of private circuits will depend upon physical constraints, so that it is fair and reasonable to provide that the service will be subject to availability. However, the Authority is satisfied that a transparent means needs to be developed to handle multiple requests for private circuits over any practical route, to ensure non-discrimination in the determination of whether there is availability for Batelco to provide any private circuit. It therefore appears to the Authority that it is fair and reasonable to require a priority policy to be adopted for the handling of such multiple requests. This Order takes into account representations made in the Response concerning contention policies, as detailed in sub-paragraph (c)(ii) above.

(e) **Wholesale DSL Service**

In addition to the amendments made to take account of the Authority's general findings in sub-paragraph (a) above, the Authority makes the following determinations concerning on the Wholesale DSL Service:

(i) **Paragraph 4.1**

Any warranties must be fair and reasonable. The Authority is satisfied that it is not fair and reasonable for Batelco to request a warranty concerning information it already holds, or in connection with circumstances that are irrelevant for the provision of the particular service.

The Authority is satisfied that a suitable definition of "standard telephone service" is required to ensure that the service description does not imply that a Wholesale DSL Service is not

available with respect to an End User who also uses a Carrier Pre-Select Service.

(ii) **Annex 2**

The Authority notes that a limited number of wholesale products are included in this service, whereas Batelco provides a broader range of retail DSL products. Given that Batelco is under an obligation to provide its access services on a non-discriminatory basis, other Licensed Operators/Access Seekers should have the ability to subscribe for the same wholesale DSL packages as are notionally made available within Batelco from its notional wholesale operation to its notional retail operation (in its Response, Batelco states that it is so highly vertically integrated that “Batelco does not provide ... products from wholesale to retail divisions, as Batelco is not structured that way”). If the Authority cannot in due time be satisfied that Batelco is in a position to offer its wholesale services in a non-discriminatory manner to Licensed Operators, it may have to consider whether it would be appropriate to exercise its power to structurally separate the Batelco wholesale business from its retail business. Consequently, the Authority is satisfied that the terms at Annex 2 of the Wholesale DSL Service need to be expanded to cover all Batelco retail DSL packages, as shown in the amended Annex 2 of the Wholesale DSL Service included at Part 2 of Annex 1 to this Order.

(f) **Bitstream Service (New Service Description)**

The Wholesale DSL Service is considered by the Authority to be a limited local loop unbundling offering to give Access Seekers access to the wholesale market for access to customer premises. It provides for a limited shared metallic path product, which can be considered to be a form of carrier pre-selection for ADSL services with the same characteristics as a limited set of current Batelco retail ADSL services. The Reference Access Offer therefore does not include a complete xDSL unbundled service, as it does not appear to provide Access Seekers with the ability to offer differentiated DSL services from certain of Batelco’s retail ADSL services.

The Authority is satisfied that the lack of a local loop unbundling product within the Reference Access Offer means that the Reference Access Offer does not meet the terms of the Access Regulation and Dominance Determination. The CAT Service and Wholesale DSL Service alone are insufficient to provide wholesale access services for the wholesale market for fixed access to customer premises for high-bandwidth and broadband access.

On 5 April 2006 (Ref: ERU/0406/075) the Authority wrote to Batelco informing them that a service description, terms and conditions and a list of charges for a bitstream access product did not appear in the

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Reference Access Offer. This was despite the Authority considering in its Dominance Determination that one of the relevant access inputs to the wholesale market for broadband access to customer premises was wholesale DSL for bitstream access.

On April 19 2006, Batelco responded (Ref: CL/98/06) stating that it considered that Batelco had complied fully with the Dominance Determination by the provision of wholesale DSL in the market for broadband access to customer premises. On 30 April 2006 the Authority and Batelco met to discuss Batelco's wholesale DSL product in the context of Batelco's letter of 19 April 2006. On May 3 2006, the Authority sent a letter to Batelco (Ref: ERU/0406/96) rejecting Batelco's interpretation of wholesale DSL as complying fully with the Dominance Determination.

The Authority is satisfied that wholesale DSL as proposed by Batelco in the Reference Access Offer is a wholesale product that allows a Licensed Operator to only resell broadband internet access and does not allow a Licensed Operator to offer any services that vary from those offered by Batelco. The Authority is satisfied that an appropriate wholesale DSL/bitstream product is one that allows an operator to provide broadband services without the constraint of imposing the type of services that can be provided.

Therefore, in the Authority's letter to Batelco of 3 May 2006 the Authority stated that a bitstream product should include access at the DSLAM (or concentrator) level and ATM (or MPLS) or IP interface. In this letter the Authority also asked Batelco to confirm by 18 May 2006 that it would be able to meet the Authority's concerns relating to a bitstream access product with all the necessary documentation and description of the service to be provided to the Authority by 31 May 2006. In a letter to the Authority from Batelco dated 18 May 2006 (Ref: CL/136/06) Batelco stated that:

"Batelco confirms that it will be in a position to provide a revised proposal for bitstream access for the Authority's consideration by 31 May 2006. While the details of the proposal are still being considered the proposal will **not** [emphasis added by Batelco] encompass the following:

- interface at **all** [emphasis added by Batelco] the network levels which the [Authority] has suggested (DSLAM. ATM, IP)
- a handover point in each of Batelco's 47 RLUs
- Service levels and performance incentives."

As a consequence of Batelco's letter of 18 May 2006 the Authority had no option but to order the implementation of an ADSL access product which incorporated access at the DSLAM (or concentrator) level and ATM (or MPLS) or IP interface. This new product, labeled a "DSL Access Service", formed part of the Draft Order.

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In the Response, Batelco repeated its assertion that a bitstream service is not necessary for Batelco to comply with the Dominance Determination and stated that the Authority has not established that the CAT Service and Wholesale DSL products are insufficient. However, the Authority is satisfied that its reasons given in this Order show that a full entry-level bitstream product is required both to fulfill the obligations on the relevant dominant operator as set out in the Access Regulation, and as an interim measure in the development of local loop unbundling, which is an obligation on Batelco set out at section 40 of the Telecommunications Law, which should have been complied with since 1 July 2004.

The Authority is satisfied that a limited bitstream access product, with IP transport provided on a “best efforts” quality of service basis, is essential to enable the telecommunications market in the Kingdom to develop, given the current lack of access to customers’ premises for Licensed Operators. The Response invited the Authority to wait to see what the effect of the offer of the CAT Service and Wholesale DSL service would be on the relevant access markets. However, the Authority received a number of comments in connection with its consultation to ISP Class License licensees on TPR88 and the provision of a wholesale DSL product to fulfill the conditional approval to TPR88 with respect to the 10BD entry-level 256kbit/s product, which suggest to the Authority that in order to promote competition it must adopt an *ex ante* regulatory approach in mandating a limited bitstream product rather than adopt an *ex post* approach, as the Authority is satisfied that there is a substantial risk that Batelco may have further consolidated its position of dominance in the broadband access market if the Authority does not act in connection with the Reference Access Offer.

The Authority’s concern that reliance on *ex post* intervention:

- (i) may not be in the interests of subscribers and users (pursuant to section 3(b)1 of the Telecommunications Law), given that any foreclosure of the broadband access market by Batelco;
- (ii) could prevent, distort or restrict competition in that market, so that inaction by the Authority would be a breach of its duty under section 3(b)2 of the Telecommunications Law,

is in the opinion of the Authority justified by the fact that in consulting on the terms of the DSL Access Service or bitstream product, as detailed below, Batelco disclosed to the Authority a rollout plan for the upgrade of its DSLAMs in its local exchanges, with the provision of an IP over MPLS transport/backhaul network for the upgraded DSLAMs. The Authority notes that no product in the Reference Access Offer provides direct access to this IP network or upgraded DSLAMs.

Whilst Batelco argues in its Response that it needs investment incentives, it does not argue directly that the Authority’s inclusion of an access product in this Order for Batelco’s new upgraded DSLAMs and IP

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over MPLS network prejudices its investment. In any event, the Authority is satisfied that the mandating of an access product to this more advanced network and upgraded DSLAMs, given that access is required for the provision of retail broadband products by Licensed Operators that are of a type currently made available by Batelco, is fair and reasonable. The Authority notes that its position is consistent with international practice. Its position is the same as that of the European Commission in the Commission's argument with the Germany over the "regulatory holiday" being proposed under the terms of paragraph 9a of the amended German telecommunications law, and in particular the proposed regulatory holiday to be granted to the incumbent operator in Germany, Deutsche Telekom, with respect to its vDSL network, and the "de facto regulatory holiday which lasts, under the present system, as long as the German regulator does not opt for an efficient remedy [for bitstream access on the German broadband market]"<sup>1</sup>.

The Response set out a number of criticisms of the Authority's proposed DSL Access Service. As a result of these criticisms, representatives of the Authority and Batelco held a meeting on 5 July 2006 to discuss the bitstream product included in the Response and the DSL Access Service included in the Draft Order. In the meeting Batelco gave the Authority information on its spare ADSL capacity and its program to upgrade its DSLAMs and develop an IP over MPLS transport/backhaul network for use with the upgraded DSLAMs (the terms "ADSL", "DSLAM", "IP" and "MPLS" being defined in the service description). Batelco also followed up the meeting with a detailed list of issues with the draft Bitstream service, as requested by the Authority, in a letter to the Authority dated 6 July 2006 (Reference CL/190/06).

As a result of the meeting and the 6 July 2006 letter, the Authority redrafted a bitstream product service description, which it provided to Batelco for comments by a letter dated 6 July 2006 (Reference ERU/0706/160). On the same date, the Authority requested Batelco provide documentation to support the charges included in the bitstream product service description included with the Response (Reference ERU/0706/161), particularly as the first draft of the Batelco bitstream product submitted to the Authority on 2 July 2006 included elements such as a service establishment charge of BD [\*] per operator and an agreement processing charge of BD[\*]with, for example, the service establishment charge being reduced by Batelco as a result of the request for documentation to BD [\*] on 6 July 2006 and then BD [\*] on 10 July 2006.

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<sup>1</sup> Viviane Reding, Member of the European Commission responsible for Information Society and Media, "The Review 2006 of EU Telecom rules: Strengthening Competition and Completing the Internal Market", speech on 27 June 2006 at the Annual Meeting of BITKOM, Brussels (published by the European Commission – SPEECH/06/422).

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Batelco responded to the letter concerning the service description on 10 July 2006 (Reference CL/201/06), as requested by the Authority. In this letter Batelco included a table of comments, which the Authority has reviewed. As a result of its review of Batelco's comments from both 6 July 2006 and 10 July 2006, the Authority is satisfied that:

- (i) Batelco is not correct in respect of sub-paragraphs (A) to (C) below in asserting that the service description:
  - (A) implies a requirement on Batelco to check and monitor the type of traffic or services provided by an Access Seeker to ensure that the Access Seeker is providing services via the access service that are in compliance with the Access Seeker's license – the form of the introduction to the service description is common to all other service descriptions in Batelco's reference offer in merely stating the type of license holder that may obtain the service;
  - (B) mandates line sharing, but as it states that the ADSL Link required to provide the service must be provided over a Useable Pair that is used by Batelco to provide a direct exchange line and telephone service to the End User, the service description reasonably implies that there is a degree of sharing of the Useable Pair, given that the essence of DSL technology is that digital data modulated onto a high frequency carrier is transported over the same copper twisted pair that carries unmixed analogue voice telephony; and
  - (C) merely describes the network elements to be provided by Batelco in order to provide access at certain bit rates with certain contention ratios so that in no way does the service description require Batelco to provide dedicated transmission capacity, except for the dedicated network element that links the Batelco Aggregation Point to the Access Seeker's Point of Presence, which, being the equivalent of a leased line, is a fair and reasonable requirement in order to achieve an end-to-end bitstream service;
- (ii) a definition of ADSL Link is required to describe the actual link used with the service in addition to the definition of Useable Pair, which describes the potential link to be used in connection with the service;
- (iii) the definition of CAR and CoS in the proposed service description and the relevant paragraphs in which those definitions were used can be deleted as recommended by Batelco, although they were included at the request of Batelco for an internationally recognized quality of service description for the service (the

Authority derived its definitions for these quality of service definitions from ITU definitions and the product descriptions of manufacturers of MPLS systems), given that the service description makes clear the “best efforts” nature of the provision of the service;

- (iv) the Aggregate Link should provide for connectivity from the DSLAM to the Access Seeker’s Point of Presence – a service that only provided a link to the Batelco Aggregation Point would not provide a complete access service for the Licensed Operator and Batelco has not explained how it would provide access to its Batelco Aggregation Points from Access Seeker’s Points of Presence;
- (v) the definition of End User makes clear, as requested by Batelco, that the bitstream service can only be provided to a Batelco customer for a direct exchange line – the Authority is satisfied that the definition of End User should not refer to the provision of telephone services so that there is no implication that a direct exchange line customer of Batelco that also is a customer of a carrier pre-select operator cannot be a customer of a Licensed Operator for a bitstream service;
- (vi) as requested by Batelco, the service description does not require either expressly or impliedly that Batelco allocate IP Addresses to the Access Seeker;
- (vii) Batelco is not correct in asserting that the Point of Presence definition implies that collocation is required, and the definition is in any event the same definition drafted by Batelco for its own CAT Service service description in the Reference Access Offer;
- (viii) requiring implementation within two months of the effective date of the service, as first proposed by the Authority, is not fair and reasonable and that it would be fair and reasonable, as with all other access (and interconnection) services, to rely on the implementation timescales or provisions described in clause 11.11 of Schedule 9 of the Reference Access Offer;
- (ix) the removal of any resale prohibition proposed by Batelco is appropriate, as detailed above in this Order;
- (x) the service description includes a fair and reasonable warranty to protect Batelco from liability for disruption;
- (xi) the inclusion of an express internet grade service is not required, given the non-discriminatory obligation on Batelco to provide equivalent quality of service and availability service levels as it does to itself in respect of the same or equivalent network elements as those used to provide the services;
- (xii) to require a Licensed Operator to batch Bitstream Requests to 32 per Batelco Exchange would be unfair and unreasonable, as there

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is no technical justification for requiring End Users to be grouped on DSLAM cards per Licensed Operator/Batelco retail operation and the configuring of each card/port does not require the on-site presence of an engineer. However, the Authority is satisfied that it would be fair and reasonable:

- (A) to permit Batelco to implement bitstream services in batches of 32, i.e. that bitstream access would only be implemented once there were 32 End User connections or configurations requested by all Licensed Operators including Batelco itself for any given Batelco Exchange to require a DSLAM card to be configured; and
  - (B) to require the Access Seeker to commit to minimum ordering levels and pay a penalty in respect of order numbers that are short of forecast order numbers, given Batelco's requirement to invest in network infrastructure in order to provide the service;
- (xiii) it is fair and reasonable to require a bitstream access service to be provided for 256 kbit/s residential service, given that Batelco itself offers such a package for its wholesale DSL access service, to permit differentiated retail services to be provided at this speed;
- (xiv) Batelco can reject orders that do not identify the bitstream service required (e.g. speed) as such orders would not be complete; and
- (xv) it is fair and reasonable to require the Access Seeker to submit orders in batches of two per day, subject to a limit on the number of orders included in a batch based upon a flat rate of throughput of orders in the numbers set out in the monthly forecasts submitted by the Access Seeker.

The Authority is satisfied that the resulting Bitstream Service included in this Order:

- (i) gives an unambiguous description of the service to be provided;
- (ii) does not mandate that Batelco provide internet access in addition to the access product;
- (iii) only requires that the product be made available as and when Batelco converts its existing DSLAMs at its BEs (as defined in the service description) in connection with its upgrade program incorporated into the service description, which program the Authority is satisfied is necessary to give Batelco additional ADSL capacity;
- (iv) does not require Batelco to provide dedicated transmission capacity or transmission capacity over asynchronous transport mode (ATM) or other networks;

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- (v) includes an appropriate industry-standard definition of DSLAM that does not prejudice any introduction by Batelco of a device that has other functionality beyond that of a standard DSLAM;
- (vi) ensures that only end users who have a digital exchange line with Batelco that is capable of supporting an ADSL service are subject to the product;
- (vii) describes the transport/backhaul of the aggregated ADSL traffic with the appropriate terms for the technology to be deployed by Batelco with respect to the product;
- (viii) determines that Batelco provide maintenance and support service to fair and reasonable service levels only; and
- (ix) only requires Batelco to provide appropriate quality of service for the mandated bitstream services.

**4.2 Reference Access Offer Schedule 7 — Facilities Access Service****(a) Scope**

The Authority is satisfied that the facilities access service should be available for all sites where collocation or facility sharing may be possible. This is because there are particular physical restraints present in the Bahrain telecommunications market that restrict or prevent actual or potential Licensed Operators from developing competing network infrastructure to Batelco. To the best of the Authority's knowledge and belief, not otherwise disproved by Batelco in its Response, Batelco is the only licensed fixed telecommunications network operator, except for Amwaj Telecommunications in the Amwaj Islands area, for which Batelco has not been declared dominant, that has been allocated public land set aside for telecommunications facilities in the Kingdom of Bahrain and no Licensed Operator has the ability to participate in the Ministry of Housing and Works' Central Planning Unit planning and co-ordination system. The Authority is therefore satisfied that it fair and reasonable to expand the definition of "Facility" in Schedule 8 of the Reference Access Offer accordingly.

In this Order, following comments included in the Response, any reference to "dominance" in respect of public land has been removed as Batelco is correct to assert that there is no relevant market in which dominance can be determined. The use of the word "dominance" in this context is therefore confusing.

**(b) Paragraph 2.3**

The Authority is satisfied that any restrictions for the facilities access service should be objective, fair and reasonable. A Batelco judgment on the suitability of any operator is not an objective criterion, and is therefore not fair and reasonable. Any particular concern of Batelco should be addressed by objective, non-discriminatory terms.

(c) **Paragraph 4**

The Authority understands the requirement for a queuing policy, but the Authority is satisfied that to ensure fairness, reasonableness and non-discrimination such a policy should be disclosed to all interested parties subject to a Supply Agreement. As a result of representation made in the Response, the Authority is satisfied that the queuing policy should not be published, as requested in the Draft Order, but that it should only be disclosed to Licensed Operators who are Access Seekers.

(d) **Paragraph 7**

The Authority is not satisfied that giving the Access Provider sole discretion in any matter is fair and reasonable.

The Authority is satisfied that to ensure fairness, reasonableness and non-discrimination the outcome of a Field Study should include the cost estimates of any Make Ready Work to give the Access Seeker the ability to determine whether obtaining the facilities access service is a cost effective means to it providing a competitive telecommunications service or network.

To ensure that these costs estimates are reasonable, the Authority is satisfied that it is fair to give the Access Seeker the option to be able to provide alternative materials or Make Ready Work where it can reasonably do so to the quality of materials or work reasonably required by the Access Provider. The Authority wishes to ensure that the requirement for Make Ready Work does not act as a barrier to the provision of a facilities access service.

(e) **Paragraph 14**

The Authority is satisfied that to be fair to Access Seekers the Access Provider should be under a reasonable obligation to keep the Make Ready Work to its cost estimates, given that once the Access Seeker decides not to exercise any option to carry out the necessary works itself, it is reliant on the Access Provider.

(f) **Paragraph 18**

The Authority is satisfied that any insurance obligations in Schedule 7 of the Reference Access Offer should be consistent those in Schedule 9 of the Reference Access Offer.

4.3 **Reference Access Offer Schedule 9 — Supply Terms Clause 11**

The Authority is satisfied that the terms of Clause 11 should apply to new Access Services as for new Interconnection Services for as long as Batelco is subject to the Dominance Determination, so that the Authority has the ability to ensure that any new services are provided subject to fair, reasonable and non-discriminatory terms and tariffs.

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**5. Reference Access Offer Tariffs – Batelco’s Response**

The Response includes a number of representations made by Batelco on the Authority’s reasoning included in the Draft Order for the Authority’s determination on tariffs. The following paragraphs give the Authority’s general reasoning on the Authority’s approach to determining the Reference Access Offer Tariffs to reply to the representations made in the Response.

**5.1 Cost Information**

The Authority is satisfied that a fair and reasonable tariff should be one where an Access Provider should be able to recover its costs and make a return on investment which is appropriate to the level of risk in the market. In assessing whether access charges are fair and reasonable, the Authority has to take into account all relevant costs that are efficiently incurred. The Authority is satisfied that considering legitimate and efficiently-incurred costs is fair and reasonable for the following reasons:

- (a) they reflect the principles of cost causation – cost of the service reflects as closely as possible the cost of the individual elements that are used by the service;
- (b) they are transparent – cost of the service is related as closely as possible to those network elements that make up the service; and
- (c) they are objective - costs are based on observable elements that constitute the service;

The Authority is not satisfied that a fair and reasonable tariff contains any of the following elements:

- (a) an access deficit component – the Authority has not as yet established if an access deficit exists and if so, the quantum of this deficit and how it should be most efficiently funded. In this context, the Authority is not satisfied that it is appropriate for Batelco to be defining, measuring and funding an unproven access deficit through a surcharge on access tariffs;
- (b) a level of risk beyond that included in the weighted average cost of capital (WACC) – the Authority notes Batelco’s description of access charges as proposed by the Authority being based on ‘direct accounting costs’. The Authority is satisfied that access charges are actually based on ‘economic costs’ as they include a regulated return on capital in the form of a WACC. As such, the WACC includes a level of risk that the Authority is satisfied is appropriate to Batelco’s network and services; and
- (c) suitable incentives for investment – the Authority is satisfied that the most suitable incentives for investment by both Batelco and Licensed Operators are cost based tariffs as these tariffs allow operators to make informed decisions based on transparent pricing mechanisms.

The Authority is satisfied that access tariffs that are not cost based may violate the principle of non-discrimination. The Authority is satisfied that Batelco cannot discriminate between the access charges that it charges or accounts for

in relation to its own retail business or operation and those that it charges other Licensed Operators for access to its network. Including a mark-up above costs to incorporate any of the above may result in tariffs that discriminate against Access Seekers.

The Authority notes that in almost every case, Batelco's proposed tariffs were substantially above costs, including a return on capital employed, as supplied by Batelco. This difference between proposed tariff and supporting costs is not supported by any cost analysis or supporting documentation supplied by Batelco, other than documentation from Batelco arguing for the existence of an access deficit, which the Authority is satisfied should not be included in access service tariffs, as explained elsewhere in this Order. Therefore the Authority cannot accept assertions without any documentation that the tariffs are fair and reasonable and it is not in a position even to assess if the tariffs have any basis whatsoever.

5.2 **Sufficiency of Batelco's Cost information**

The Authority has received a copy of Batelco's 2004 Audited Accounts.  
[.....] \*

[...]\*

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[...]\*

Until and at such time as Batelco satisfactorily addresses the Authority's concerns, the Authority will continue to use costs derived from Batelco's 2004 Un-audited Accounts unless and until Batelco is in a position to supply 2005 Accounts.

In addition, the Authority notes that cost information supplied in support of Batelco's proposed Reference Access Offer was itself based on 2004 Un-audited Accounts. In some cases the Authority has been able to refer costs directly back to the 2004 Un-audited Accounts. In other cases it seems that Batelco has performed unknown intermediate calculations that are not transparent to the Authority.

Therefore, for the Authority to use 2004 Audited Accounts would mix costs that could be audited back to 2004 Audited Accounts with costs that could not and which were supplied by Batelco based on 2004 Un-audited Accounts.

The Authority notes that in its supporting cost documentation Batelco sourced and used certain cost data from its 2004 Un-audited Accounts. To this cost data Batelco applied a WACC of 8.40% (the 2003 WACC) for Access Network capital costs. The Authority has maintained this convention.

The Authority notes that it was Batelco that used a WACC of 8.40% for Access Network capital costs (and 9.63% for Core Network capital costs).

The Authority has a responsibility to validate Batelco's cost information and make corrections where it believes errors have been made. The Authority observes that Batelco has supplied several versions of its 2004 Un-audited Accounts, with differences between versions.

The Authority notes that the direct accounting cost of a service would not include a return on capital employed. Accounting costs are those recognized by accounting bodies, such as operating expenditure, depreciation, asset impairment, etc. and do not include a return on capital employed. The Authority allows/includes a return on capital employed because costs that do so are more reflective of economic, rather than accounting, costs including the risks that the company may face.

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**5.3 Commercial Terms and Conditions**

The Authority welcomes commercially negotiated tariffs between Batelco and Licensed Operators. However, the Authority is not satisfied that these commercially negotiated tariffs should set either a benchmark for existing operators or a precedent for new operators. Batelco is reminded that the Reference Access Offer is a reference offer only, which does not prevent Batelco entering into commercial negotiations with Licensed Operators over access tariffs.

**5.4 Innovative Pricing**

The Authority welcomes and encourages innovation in terms of tariffs and services by Batelco and Licensed Operators in the retail market. However, in order for Licensed Operators to be able to innovate in the retail market they must be able to gain access at the wholesale level to a number of services at a reasonable level of tariff. The Authority is not satisfied that this is the case in the Reference Access Offer due to the following:

- (a) Batelco did not offer a bitstream access product;
- (b) Batelco included only two (2) Wholesale DSL services in the Reference Access Offer despite offering 12 separate DSL services in the retail market;
- (c) for the business DSL wholesale package, Batelco priced the wholesale charge applicable at the date of the Reference Access Offer above the current tariffs it charges in the retail market (following the approval by the Authority of TPR84 on 12 December 2005);

The Authority is satisfied that accepting any or all of the above will severely hinder that ability of competitors to Batelco implementing innovate tariffs and services in the retail market. The Authority is also satisfied that given the current difference between retail tariffs and the Authority's proposed wholesale tariffs for a number of services in the Reference Access Offer, Batelco will still maintain the ability to offer innovate tariffs and services in the retail market should it wish.

**5.5 Customer Access Tails**

The Authority is satisfied that the term "local tails" used in connection with the CAT Service means Customer Access Tail (CAT) circuits.

The Authority is therefore satisfied that the description of CAT Service set out in Batelco's proposed Reference Access Offer is not consistent with that contained in Paragraph (B) 2 of the Response. In the Reference Access Offer, CAT circuits are described by Batelco as "...a wholesale dedicated private leased circuit service for carrying Access Seeker's traffic within Bahrain between an End User premises and an Access Seeker's Point of Presence." This description make no reference to IPLCs as set out in Paragraph (B) 3 on page 42 of Batelco's Response, but the Authority accepts that a local tail could be used to support IPVPNs as set out in Paragraph (B) 2 on page 42 of Batelco's Response as well as supporting other services not referred to in Paragraph (B) 2 or Paragraph (B) 3.

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The Authority notes that the description of the CAT Service as offered by Batelco in the Reference Access Offer is unclear as to whether one local tail or two local tails are included in the service. The Authority notes that in some countries one local tail is included in the equivalent of CAT circuits; in other countries two local tails are included. The Authority considers that the use of the plural “premises” can be interpreted to mean two tails.

The Authority has reached this conclusion because, as the Authority notes in documentation supplied by Batelco in support of the monthly recurring cost per CAT circuit (ref: 20060510 TRA RAO response-LLCO-CATs.xls), the cost of Customer Premises Equipment (CPE) is counted twice when calculating CPE costs per unit. The Authority also notes that for 64 kbit/s and 256 Kbit/s CAT circuits, two cable pairs are used, whereas for 2048 Kbit/s CAT circuit four cable pairs are used.

The Authority therefore concludes that Batelco’s description of the service in the Reference Access Offer as being “a wholesale dedicated private leased circuit service for carrying Access Seekers’ traffic within Bahrain between an End User premises and an Access Seeker’s point of presence” could be interpreted to mean the availability of two local tails in the service. In a meeting between Batelco and the Authority held on 5 July 2006 Batelco confirmed to the Authority that the CAT Service refers to the availability of two local tails.

#### 5.6 **LLCO Circuits**

In its proposed Reference Access Offer local leased circuits for other Licensed Operators (“LLCO circuits”) are described by Batelco as “...a wholesale dedicated private leased circuit service for carrying Access Seeker’s traffic within Bahrain between two of the Access Seeker’s Points of Presence.”

The Authority notes that Batelco’s proposed tariff for LLCO circuits is [\*] of the equivalent retail tariff for a leased line. If a Licensed Operator wished to use an LLCO circuit to provide a competing leased line circuit, this would leave [\*] of Batelco’s retail tariff to cover the Licensed Operator’s retail costs as well as the cost of the circuit between the End User’s premises and the Licensed Operator’s point of presence (PoP). The Authority is not satisfied that such a proposed tariff is fair and reasonable, because the cost to the Access Seeker of providing access to the customer’s premises would exceed [\*]. As a result, an Access Seeker could not provide a retail leased line to a customer that used an LLCO circuit.

#### 5.7 **Wholesale DSL**

The Authority asked for specific examples from Batelco of how DSLAM costs had been calculated by Batelco. In its resulting calculation Batelco used an aggregate figure for DSLAM costs that the Authority could not reconcile back to Batelco’s 2004 Un-audited Accounts. The Authority has instead used DSLAM costs provided by Batelco (TPR/88) that take into account Batelco’s replacement/upgrade program in which dedicated DSL DSLAMs will be replaced with “combi-DSLAMs” that provide both DSL and PSTN access.

The Authority has not assumed as Batelco states in its Response that Local Loop costs are included in DSLAM costs.

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The Authority notes that in documentation submitted by Batelco in support of its proposed Reference Access Offer, Batelco itself used fully allocated ATM costs. The Authority notes that it could not reconcile the value of ATM costs used by Batelco back to the 2004 Un-audited Accounts. The Authority used core network costs that reflect Batelco's current upgrade to MPLS transmission.

In the use of Batelco's previously submitted tariff proposals for residential broadband packages (TPR88) and business broadband packages (TPR84) to establish wholesale DSL costs, the Authority notes that all but one broadband package tariffs were approved and only one conditionally approved. The Authority therefore does not accept Batelco's assertion in its Response to the Draft Order that underlying assumptions have "fundamentally changed" for these tariff proposals as a consequence of the Authority's rejection of the 256/64 kbps 10 BD package.

For wholesale after sales costs the Authority has accepted Batelco's costs despite Batelco not supplying all supporting documentation. For the cost category "Other", the Authority has not accepted this charge as no supporting documentation was added or supplied by Batelco. The Authority notes that in Batelco's Response Batelco states that the charge should be included, but the Response does not include any justification or supporting documentation to explain the charge. The Authority cannot accept as fair and reasonable undefined and improperly calculated "Other" charges.

**6. Reference Access Offer Tariffs Determination**

The Authority's reasons for ordering changes to the tariffs of the Reference Access Offer are as follows:

**6.1 Overall assessment of the Reference Access Offer**

For those tariffs for which supporting documentation was supplied by Batelco, the Authority has established that some of the tariffs contain errors and inconsistencies which result in the Reference Access Offer including unfair and unreasonable tariffs.

The Authority is therefore satisfied that for those tariffs in the Reference Access Offer that do not reflect their underlying costs, and as a consequence of some tariffs adopting incorrect cost concepts, a number of tariffs over-recover their costs.

In addition, the Authority is satisfied that insufficient supporting documentation was supplied by Batelco for some of the tariffs included in the Reference Access Offer to enable the Authority to assess whether the tariffs were fair, reasonable and non-discriminatory.

**6.2 A summary of documentation requested by the Authority**

Adequate information is required by the Authority in order to make an informed assessment of the tariff concerned, including on each of the steps involved in the tariff-setting process. Where adequate information was not supplied, the Authority could not be satisfied that the end tariff is fair, reasonable and non-discriminatory.

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In a letter to Batelco dated 30 March 2006 (Ref: ERU/03/06/073) the Authority noted that no relevant supporting documentation had been supplied by Batelco to support the tariffs in the Reference Access Offer. As such, it invited Batelco to submit any relevant supporting documentation. Batelco's response of 6 April 2006 (Ref: CL/89/06) supplied supporting documentation for the Customer Access Tails (CAT) Service and Local Leased Circuits for Other Licensed Operators (LLCO). The response also stated that supporting information was available for the following Access Services:

- (a) International Private Leased Circuits – “Previous retails pricing and costing information was provided and proposed by Batelco as part of TPR36”;
- (b) Dial-Up Internet Access – “Batelco has applied tariffs for mobile or fixed call termination in reverse for Internet dial-up”; and
- (c) PSTN Transit, Inter Operator Transit Access Service – “Other Access Products contained in the Reference Access Offer are subject to current scrutiny under the Reference Interconnection Offer costing exercise (PSTN Transit, Inter Operator Transit Access Service)”.

The Authority sent a further letter to Batelco on 17 April 2006 (Ref: ERU/0406/076) which requested any remaining supporting documentation. In response to this letter, between the 10 and 15 May 2006 Batelco sent the Authority the following costing information:

- (a) a spreadsheet of CAT and LLCO costs;
- (b) a spreadsheet of Wholesale DSL set up and processing costs;
- (c) a spreadsheet of Wholesale DSL rental costs; and
- (d) a summary explanation of DSL Wholesale tariffs (Ref: CL/129/06/).

The Authority met with Batelco on 16 May 2006 to discuss the Reference Access Offer tariffs and as a result of this meeting Batelco supplied to the Authority a “Working examples” spreadsheet of DSLAM, ATM and Transmission costs relating to its one business and one residential package outlined in the Reference Access Offer.

The Authority further met with Batelco on 5 July 2006 where Batelco agreed to submit supporting documentation to support its proposed Bitstream charges. On 6 July 2006 the Authority receive this supporting documentation from Batelco (Ref: 20060706 LLU & BITSTREAMFINAL TRA.xls).

In a further meeting between the Authority and Batelco on 6 July 2006 the Authority requested further supporting documentation from Batelco to support the non-network charge for a bitstream product. Batelco supplied this documentation on 10 July 2006 to the Authority (Ref: 20060710\_LLU & BITSTREAMFINAL (Version 4).xls and CL/200/06)

The Authority did not request supporting documentation from Batelco relating to Carrier Pre-Selection. This is because Carrier Pre-Selection tariffs were approved by the Authority on 20 September 2005 (Ref: ERU/0905/175) and the

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tariffs that appeared in the Reference Access Offer relating to this service do not vary from those previously approved.

**6.3 A summary of documentation received by the Authority**

The tables below give a summary of supporting documentation received by the Authority from Batelco.

**(a) Customer Access Tail (CAT) Service**

<b>Speed (kbps)</b>	
64	Supporting documentation for this tariff supplied
256	Supporting documentation for this tariff supplied
2048	Supporting documentation for this tariff supplied

**(b) Dial-Up Internet Access Service**

<b>Schedule</b>	<b>Service</b>	
2-X.1	Carriage of Internet Dial-up call from Batelco Mobile Telephone	Supporting documentation submitted for the Reference Interconnection Offer (Reference Interconnection Offer)
2-X.2	Carriage of Internet Dial-up call from Batelco Fixed PSTN Telephone	Supporting documentation submitted for the Reference Interconnection Offer (Reference Interconnection Offer)
2-X.3	Carriage of Internet Dial-up call from directly connected customers of another operator	Supporting documentation submitted for the Reference Interconnection Offer (Reference Interconnection Offer)
2-X.4	Charges for link installation	No Supporting documentation for this tariff supplied
2-X.5	Link Rental	No Supporting documentation for this tariff supplied

**(c) Inter-Operator Transit Access Service**

<b>Schedule</b>	<b>Service</b>	
2-9.1	Per transit call as set out in service description, payable by the Access Seeker	Supporting documentation submitted for the Reference Interconnection Offer (Reference Interconnection Offer)

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Schedule	Service	
2-9.2	Per transit call as set out in service description, payable by the Access Seeker	Supporting documentation submitted for the Reference Interconnection Offer (Reference Interconnection Offer)

(d) **International Private Leased Circuit**

Service	Monthly Price (Zone 1, 2, 3)
Speed (kbps)	Open Service Period or 1 year Fixed Service Period.
256	No supporting documentation supplied - obtained from TPR36
512	No supporting documentation supplied - obtained from TPR36
1024	No supporting documentation supplied - obtained from TPR36
2048	No supporting documentation supplied - obtained from TPR36

Service	Monthly Price (Zone 1, 2, 3)
Speed (kbps)	2year or 3 year Fixed Service Period.
256	No supporting documentation supplied - obtained from TPR36
512	No supporting documentation supplied - obtained from TPR36
1024	No supporting documentation supplied - obtained from TPR36
2048	No supporting documentation supplied - obtained from TPR36

(e) **Local Leased Circuit for OLO (LLCO)**

Speed (kbps)	Monthly Tariff (BD)	Open Period
64	[*]	Supporting documentation for this tariff supplied
256	[*]	Supporting documentation for this tariff supplied
512	[*]	Supporting documentation for this tariff supplied
2048	[*]	Supporting documentation for this tariff supplied

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<b>Speed (kbps)</b>	<b>Monthly Tariff (BD)</b>	<b>Fixed Period &gt; 2 years</b>
64	[*]	Supporting documentation for this tariff supplied
256	[*]	Supporting documentation for this tariff supplied
512	[*]	Supporting documentation for this tariff supplied
2048	[*]	Supporting documentation for this tariff supplied

(f) **PSTN Transit Service**

<b>Schedule</b>	<b>Service</b>	
2-1.1	Per transit call as set out in service description	No supporting documentation submitted

(g) **Wholesale International Switched Circuit**

<b>Schedule</b>	<b>Service</b>	
3-5	Wholesale International Switched Circuit	Supporting documentation submitted from TPR93

(h) **Services Description 2-X: Wholesale DSL Service**

<b>Schedule</b>	<b>Service</b>	
DSL 1	Fee to establish Wholesale DSL Service relationship	Limited supporting documentation for this tariff supplied
DSL 2	Agreement Processing Fee	Limited supporting documentation for this tariff supplied
DSL 3	Fee for processing DSL Transfer Request and completion	No supporting documentation for this tariff supplied
DSL 4	Charges for rejects reversals, and withdrawals associated with DSL Transfer, Invalid Transfer	No supporting documentation for this tariff supplied
DSL 5	Fee for a change of speed associated with DSL transfer if applicable	No supporting documentation for this tariff supplied

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Schedule	Service	
DSL 6	External removal or change number	Supporting documentation for this tariff supplied
DSL 7	Monthly end user port tariffs	Limited supporting documentation for this tariff supplied – obtained from TPR88 and TPR84
DSL 8	Usage tariffs	Supporting documentation for this tariff supplied
DSL 9	Fee for a call out for a technician at Access Seeker request	No supporting documentation for this tariff supplied
DSL 10	Fee for suspension of DSL Service at Access Seeker request	No supporting documentation for this tariff supplied

(i) Services Description 2-X Bitstream Service

Schedule	Service	
BS 1	Fee to establish Wholesale DSL Service relationship	Limited supporting documentation for this tariff supplied
BS 2	Agreement Processing Fee	Limited supporting documentation for this tariff supplied
BS 3	Maintaining relationship charge	Limited supporting documentation for this tariff supplied
BS 4	Port connection	No supporting documentation for this tariff supplied
BS 5	Charges for rejects, reversals and withdrawals associated with Bitstream order	No supporting documentation for this tariff supplied
BS 6	Charges for a change of speed	No supporting documentation for this tariff supplied
BS 7	External removal charge	No supporting documentation for this tariff supplied
BS 8	Monthly end-user port/speed charge	Supporting documentation for this tariff supplied

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<b>Schedule</b>	<b>Service</b>	
BS 9	Port Cessation charge	No supporting documentation for this tariff supplied
BS 10	Charges for Call out for technician at Licensed Operator request	No supporting documentation for this tariff supplied
BS 11	Charges suspension of Bitstream Service at Licensed Operator request	No supporting documentation for this tariff supplied

**6.4 Assessment of Reference Access Offer Tariffs**

For some services, the Authority has been able to identify specific problems in the calculation of Reference Access Offer tariffs that it can rectify on the basis of the accounting and other information provided. These are set out below. Such reworking is dependent on the veracity of the underlying accounting information provided by Batelco.

**(a) Narrowband Dial-Up Facilities**

Batelco's narrowband dial-up facilities provide a Dial-Up Internet Access Service. Batelco's proposed tariff for this service is a traffic based tariff per minute equal to the "[c]urrent rate for Batelco's PSTN Terminating Access Service in Service Description 1-3."

The Authority understands this "current rate" to mean Batelco's proposed tariff of 6.50 Fils per minute for PSTN Terminating as set out in its proposed amended Reference Interconnection Offer submitted to the Authority on 15 February 2006.

The Authority is satisfied that the network architecture as used by Batelco for this service implies that an interconnecting dial-up operator must interconnect at the GMSC level. Given that a GMSC is a mobile switch, the Authority is satisfied that this cannot be the correct network architecture.

To allow a fixed operator to be charged for interconnect at other than the GMSC the Authority is satisfied that the Dial-Up Internet Access Service should consist of three tariffs for the following:

- (i) mobile Dial-Up Internet Access Service (being understood to be internet access using a mobile telephone);
- (ii) single tandem PSTN Dial-Up Internet Access Service; and
- (iii) double tandem PSTN Dial-Up Internet Access Service.

A fixed line interconnecting operator would not have to choose between single tandem Dial-Up Internet Access Service or double tandem Dial-Up Internet Access Service. Instead, the appropriate tariff would apply

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depending on whether an individual dial-up internet session required one or two tandem exchanges to complete the connection.

The Authority has been able to reconcile the network components of the mobile Dial-Up Internet Access Service tariff with Batelco's 2004 Un-audited Accounts. Consequently, the proposed Reference Access Offer network tariff for this service is determined at 7.64 Fils per minute.

To this network tariff the Authority determines that [\*]fils/min could be added to represent the cost of interconnection specific services as calculated below. The interconnection specific costs, represents an allocation of the general costs of those activities carried out because of the existence of wholesale markets.

In 2004 Ofcom issued a Consultative Document and Statement on BT's interconnection specific (or PPP) charge (Review of BT's product management, policy and planning (PPP) charge – Statement, 30 July 2004, at

[http://www.ofcom.org.uk/consult/condocs/rev\\_bt\\_pm/statement/statement.pdf](http://www.ofcom.org.uk/consult/condocs/rev_bt_pm/statement/statement.pdf)), which concluded that interconnection specific costs incurred by BT Wholesale in the provision of narrowband interconnection services to BT Retail should be recovered across all call minutes that are conveyed or transit on BT's network.

The Authority is satisfied that the principle of non-discrimination as outlined by Ofcom should apply in the calculation of interconnection specific costs for Batelco, and Batelco's interconnection specific cost based on this principle is shown below.

<b>Total Cost</b>	<b>Traffic</b>	<b>ISC</b>
BD [*]	[*]min	[*]Fils

Using this methodology the Authority determines that the interconnection specific cost of [\*] Fil per minute, which could apply to each interconnection charge, will recover Batelco's total interconnect specific cost of BD [\*].

For the single tandem and double tandem charges described below, the Authority has also been able to reconcile each of the network components with Batelco's 2004 Un-audited Accounts.

The table below presents route factors and network tariff for single tandem Dial-Up Internet Access Service as calculated by the Authority based upon the 2004 Un-audited Accounts.

<b>Network Component</b>	<b>Component Charge</b>	<b>Route Factor</b>
RLU	[*] Fils	1.00
RLU – LX	[*] Fils	1.00

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<b>Network Component</b>	<b>Component Charge</b>	<b>Route Factor</b>
LX	[*]Fils	1.00
LX – TX	[*] Fils	1.00
TX	[*] Fils	1.00
<b>Total Network Charge</b>	<b>2.01 Fils</b>	<b>NA</b>

As a result, the Authority determines that the carriage charge for Dial-Up Internet Access from a Batelco fixed PSTN telephone (single tandem) should be 2.01 Fils/min.

To this network tariff the Authority is satisfied that no more than [\*] Fil/min calculated as described above could be added to represent the cost of Interconnection-specific services.

The table below presents route factors and network tariff for double tandem PSTN Terminating Access as calculated by the Authority, based upon the 2004 Un-audited Accounts.

<b>Network Component</b>	<b>Component Charge</b>	<b>Route Factor</b>
RLU	[*] Fils	1.00
RLU – LX	[*] Fils	1.00
LX	[*]Fils	1.00
LX – TX	[*] Fils	1.00
TX	[*] Fils	2.00
TX – TX	[*] Fils	1.00
<b>Total Network Charge</b>	<b>3.03 Fils</b>	<b>NA</b>

As a result, the Authority determines that the carriage charge for Dial-Up Internet Access from a Batelco fixed PSTN telephone (double tandem) should be 3.03 Fils/min.

To this network tariff the Authority is satisfied that no more than [\*] Fil/min could be added to represent the cost of Interconnection-specific services.

(b) **Inter-Operator Transit Access Services**

For this service the network components and route factors present in Batelco's 2004 Un-audited Accounts imply connection to a mobile switch only. To allow fixed line interconnection the Authority is satisfied that Inter-Operator Transit Access tariffs should be split into two network element tariffs – fixed and mobile. The network elements for both Mobile

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and Fixed Transit Access Services are directly reconcilable back to Batelco's 2004 Un-audited Accounts and are presented below:

(i) Inter-Operator Transit Access Services (Fixed)

<b>Network Component</b>	<b>Component Charge</b>	<b>Route Factor</b>
TX	[*] Fils	2.00
TX-TX	[*] Fils	1.00
<b>Total Network Charge</b>	<b>[*] Fils</b>	<b>N/A</b>

and

(ii) Inter-Operator Transit Access Services (Mobile)

<b>Network Component</b>	<b>Component Charge</b>	<b>Route Factor</b>
TX	[*] Fils	1.00
TX – GMSC	[*] Fils	1.00
GMSC	[*] Fils	1.00
<b>Total Network Charge</b>	<b>[*] Fils</b>	<b>N/A</b>

To these network tariffs the Authority is satisfied that no more than [\*] Fil/min calculated as described above could be added to represent the cost of Interconnection-specific services.

As a result, the Authority determines that the per Transit Call charge for Inter-Operator Transit Access Services should be 2.68 Fils/min.

(c) **PSTN Transit Service**

Batelco did not provide supporting documentation to allow the Authority to assess the charge for the PSTN Transit Service as part of the proposed Reference Access Offer. However, as part of a previously supplied document (Ref: Interconnect Prices Submitted by Batelco Adjusted for Differences in Treatment by TRA) in support of the Approved Reference Interconnection Offer, Batelco supplied Network Components and Route Factors that the Authority has used to calculate the PSTN Transit Service charge. The table below presents the Network Components and Route Factors used by Batelco in support of its current PSTN Transit Service charge of 7.10 Fils per minute together with the Network Component costs from the FAC 2004 Un-audited Accounts.

<b>Network Component</b>	<b>Charge Component</b>	<b>Route Factor</b>
RLU	[*] Fils	2.00

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<b>Network Component</b>	<b>Charge Component</b>	<b>Route Factor</b>
RLU – LX	[*] Fils	2.00
LX	[*] Fils	2.00
LX – TX	[*] Fils	2.00
TX	[*] Fils	1.00
<b>Total Network Charge</b>	<b>[*] Fils</b>	<b>NA</b>

As can be seen, the cost of the PSTN Transit Service as calculated by the Authority does not equal Batelco's proposed charge of [\*] Fils per minute as it appears in the Reference Access Offer. The Authority is unable to account for the difference in the two charges.

The Authority is satisfied that to this network charge no more than [\*] Fil/min could be added to represent the cost of Interconnection-specific services as calculated above.

As a result, the Authority determines that the per Transit Call charge for PSTN Transit Services should be 4.03 Fils/min.

**(d) Customer Access Tails**

Customer Access Tail (CAT) circuits are described by Batelco as "...a wholesale dedicated private leased circuit service for carrying Access Seeker's traffic within Bahrain between an End User premises and an Access Seeker's [Point of Presence]."

Batelco proposes to offer three CAT circuits with the following bandwidths:

- (i) 64 kbit/s;
- (ii) 256 kbit/s; and
- (iii) 2048 kbit/s.

The Authority is satisfied that a CAT Service involves two Access and CPE components, one for each end of the leased line circuit connecting an End User's premises to an Access Seeker's Point of Presence. It also involves core transmission within Batelco's Transmission Network.

On 10 May 2006 Batelco provided a summary cost spreadsheet (20060510 TRA Reference Access Offer response-LLCO-CAT.xls) in support of its proposed CAT circuits. The results of the underlying cost of each CAT circuit per month as provided by Batelco are presented in the table below.

<b>Cost Element</b>	<b>64 kbit/s</b>	<b>256 kbit/s</b>	<b>2048 kbit/s</b>

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<b>Cost Element</b>	<b>64 kbit/s</b>	<b>256 kbit/s</b>	<b>2048 kbit/s</b>
Core Network	BD [*]	BD [*]	BD [*]
Access Network	BD [*]	BD [*]	BD [*]
CPE	BD [*]	BD [*]	BD [*]
Service Provision	BD [*]	BD [*]	BD [*]
Wholesale	BD [*]	BD [*]	BD [*]
<b>Total Cost per month</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>
<b>Proposed Charge per month</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>

In assessing Batelco's CAT Service tariffs, the Authority notes that:

- (i) for the network components above (Core Network, Access Network and CPE), the only network component that directly reconciles back to the 2004 Un-audited Accounts is the monthly Core Network cost. This cost includes a return on capital employed of 9.63% as determined by the Authority in the cost of capital decision of 9 August 2003. Access and Customer Premises Equipment (CPE) costs do not reconcile back to the 2004 Un-audited Accounts; and
- (ii) there is a large difference between the total cost of each CAT circuit and its proposed wholesale tariff. For all three bandwidths the proposed tariff is more than [\* a multiple] the total costs.

In relation to point (i) above, the Authority is satisfied that Batelco's Access Network and CPE costs for CAT circuits are incorrect and as such the Authority has replaced Batelco's total (or aggregate) Access Network and CPE costs with those presented in Batelco's 2004 Un-audited Accounts. The table below outlines the correct cost basis as calculated by the Authority and based upon the 2004 Un-audited Accounts. The Service Provision and Wholesale Charge that make up the remainder of the total tariff are those proposed by Batelco, which the Authority is satisfied are fair and reasonable.

<b>Cost Element</b>	<b>64 kbit/s</b>	<b>256 kbit/s</b>	<b>2048 kbit/s</b>
Core Network	BD [*]	BD [*]	BD [*]
Access Network	BD [*]	BD [*]	BD [*]
CPE	BD [*]	BD [*]	BD [*]
Service Provision	BD [*]	BD [*]	BD [*]
Wholesale	BD [*]	BD [*]	BD [*]

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Cost Element	64 kbit/s	256 kbit/s	2048 kbit/s
<b>Total cost per month</b>	<b>BD 52</b>	<b>BD 81</b>	<b>BD 359</b>

As the Authority has previously mentioned, the Authority notes that the description of the CAT Service as offered by Batelco in the Reference Access Offer is unclear as to whether one local tail or two local tails are included in the service. The Authority is satisfied that because Customer Premises Equipment (CPE) is counted twice when calculating CPE costs per unit and 64 kbit/s and 256 Kbit/s CAT circuits include two cable pairs (four for 2048 kbps), this service includes the availability of two local tails in the service. Therefore, the Authority notes that when recalculating the CPE and Access Network costs based on the 2004 Un-audited Accounts, as outlined above, it has not reduced the number of CPE or cable pairs per CAT circuit to reflect only one local tail in the service.

In relation to point (ii), the Authority is satisfied that an average mark-up over network costs for CAT Services as proposed by Batelco of [\*] percent is not fair and reasonable. Each of the network cost elements above includes a cost of capital calculation based upon the regulated rate of return for the service. As such, the Authority determines that a fair and reasonable mark-up is already included in the total charges outlined in the table above.

The Authority notes in a letter from Batelco dated 6 April 2006 (Ref: CI/89/06) that Batelco stated that for CATs, “Batelco has charged these [CAT Services] to take account of the investment it has made in the local network as well as try to recover some of the access-deficit incurred by Batelco”.

The Authority notes Batelco’s letter of 20 April 2006 (Ref:CL/105/06) in which Batelco claim of the existence of an Access Deficit as a consequence of PSTN line rental charges being below their cost of provision. However, the Authority is of the opinion that in determining the existence of an access deficit in markets that are not yet fully competitive a holistic approach must be undertaken by including the costs and revenues of all services sharing common costs with the PSTN.

Further, if the existence of an access deficit is established by the Authority, the Authority notes that the methodologies implemented by the majority of national regulatory authorities in the recovery of such a deficit has varied from placing an access deficit contribution on an incumbents PSTN termination and origination charges to rebalancing of line rental and/or local call tariffs. Recovery methods have not involved the implementation of charges on Access products.

The Authority is therefore satisfied that it would not be fair and reasonable to allow Batelco to incorporate an access deficit charge in its wholesale prices for access services.

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The Authority is satisfied that fair and reasonable tariffs for CAT Services that enable Batelco to recover its costs of providing the CAT Service could therefore be determined as follows:

<b>Service Description</b>	<b>Proposed Charge per month</b>
64 kbit/s	BD 52
256 kbit/s	BD 81
2048 kbit/s	BD 359

**(e) Local Leased Circuit for OLO**

Local Leased Circuit for OLO (LLCO) circuits are described by Batelco as "...a wholesale dedicated private leased circuit service for carrying Access Seeker's traffic within Bahrain between two of the Access Seeker's Points of Presence."

Batelco proposes to offer four LLCO circuits with the following bandwidths:

- (i) 64 kbit/s;
- (ii) 256 kbit/s;
- (iii) 512 kbit/s; and
- (iv) 2048 kbit/s.

On 10 May 2006 Batelco provided a summary cost spreadsheet (20060510 TRA Reference Access Offer response-LLCO-CAT.xls) in support of its proposed LLCO Charges. The results of the underlying cost as provided by Batelco of each LLCO per month are presented in the table below.

<b>Cost Element</b>	<b>64 kbit/s</b>	<b>256 kbit/s</b>	<b>512 kbit/s</b>	<b>2048 kbit/s</b>
Core Network	BD [*]	BD [*]	BD [*]	BD [*]
Service Provision	BD [*]	BD [*]	BD [*]	BD [*]
Wholesale	BD [*]	BD [*]	BD [*]	BD [*]
<b>Total Cost per month</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>
<b>Proposed charge per month</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>

The cost element Core Network is traceable back to the 2004 Un-audited Accounts. Service provision and wholesale costs as shown in the table above are accepted by the Authority as being fair and reasonable as they

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are the same as those that apply for CAT circuits. The Authority therefore accepts the total cost of LLCOs as provided by Batelco.

However, the Authority is satisfied that there are very large differences between the total cost of each LLCO circuit and its proposed wholesale tariff as supplied by Batelco in the table above. For all bandwidths the proposed tariff is more than double the underlying costs.

Further, information provided to the Authority by Batelco in the Letter of 6 April 2006 explains that the proposed wholesale tariffs for LLCO circuits represented a [\*] percent reduction over the associated retail tariff of leased circuits.

The table below sets out Batelco's proposed wholesale tariff for LLCO circuits together with the retail tariff.

<b>Bandwidth</b>	<b>Retail Leased Line Charge/month</b>	<b>LLCO Charge/month</b>	<b>Difference</b>
64 kbit/s	BD 140	BD [*]	BD [*] ([*]%)
256 kbit/s	BD 260	BD [*]	BD [*] ([*]%)
512 kbit/s	BD 450	BD[*]	BD [*] ([*]%)
2048 kbit/s	BD 940	BD [*]	BD [*] ([*]%)

However, the Authority is satisfied that a retail leased line is a combination of a CAT circuit and a LLCO circuit which includes two access tails (one at each end of the circuit) together with Core Transmission between the two tails. Therefore the Authority is satisfied that setting the proposed wholesale tariff for LLCOs at [\*] percent of the retail tariff for leased lines represents double counting by Batelco and results in an over recovery of Batelco's costs.

This point is supported by a document submitted by Batelco to the Authority on 24 October 2004 in support of proposed tariff reduction for leased lines.<sup>2</sup> There a leased line is defined as providing point-to-point digital connectivity between two customer sites.

The Authority is satisfied that setting tariffs for LLCO at [\*] percent of retail leased line tariffs or the inclusion of an access deficit charge on top of network costs for LLCOs which results in an average mark-up over network costs for these services of [\*] percent is not fair and reasonable.

The Authority also notes that Batelco in their letter to the Authority of 6 April 2006 (Ref: C1/89/06) stated that "Batelco has charged these [LLCO services] to take account of the investment it has made in the local

<sup>2</sup> Proposal for Local Leased Line Tariff Reduction (Ref TPR/41).

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network as well as try to recover some of the access-deficit incurred by Batelco”.

The Authority is satisfied that similar to CAT Services, Batelco’s charges for LLCOs also include an access deficit contribution. For the reasons set out above in connection with CAT Services, the Authority is not satisfied that the inclusion of access deficit contributions for LLCOs is fair and reasonable.

The Authority is therefore satisfied that fair and reasonable tariffs for LLCOs to enable Batelco to recover its costs of providing LLCOs could be determined as follows:

<b>Service Description</b>	<b>Proposed Charge per month</b>
64 kbit/s	BD 23
256 kbit/s	BD 52
512 kbit/s	BD 59
2048 kbit/s	BD 315

(f) **Wholesale DSL Service**

Wholesale DSL services are described by Batelco as “...a service which enables the Access Seeker to resell to End Users the Access Provider’s high speed internet access services...Under the Wholesale DSL service the internet access, network infrastructure platform, billing information, service provisioning and support are provided to the Access Seeker by Batelco and the Access Seeker markets and bills the Wholesale DSL services to the end user”.

In the Reference Access Offer, Batelco proposes to offer two Wholesale DSL products. These wholesale packages are described in the table below.

<b>Package/Product</b>	<b>Price/ Month</b>	<b>Capacity</b>	<b>Price&gt;Cap</b>
256 kbit/s / 64 kbit/s Residential Broadband	BD [*]	5 GB	[*] Fils/MB
1 Mbit/s / 256 kbit/s Business Broadband	BD [*]	15 GB	[*] Fils/MB

The Authority notes that for the wholesale 256 kbit/s / 64 kbit/s Residential Broadband package at BD [\*] per month, Batelco currently has no corresponding package in the retail market. However, for Batelco’s wholesale business broadband package the proposed wholesale tariff is BD [\*] per month whereas currently Batelco offers a 1 Mbit/s /

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256 kbit/s Business Broadband package in the retail market for BD 150 per month.

Batelco has provided cost breakdown information for the two packages outlined above to the Authority in a spreadsheet "20060514 Wholesale DSL Rental TRA Submission.xls". This cost information is shown below.

<b>Costing Element</b>	<b>Residential 256 (5 GB)</b>	<b>Business 1 Mb (15 GB)</b>
Local Loop & DSLAM	BD [*]	BD [*]
ATM	BD [*]	BD [*]
INET Platform	BD[*]	BD [*]
International Links	BD [*]	BD[*]
CPE- Biz	BD [*]	BD [*]
<b>Total Network Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>
After Sale Care	BD [*]	BD [*]
Wholesale	BD [*]	BD [*]
Others	BD [*]	BD [*]
<b>Total Wholesale Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>
<b>Fixed Monthly Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>

*Residential Package*

The Authority has found that none of Batelco's costing elements presented in the table above have been derived from the 2004 Un-audited Accounts.

For the DSLAM cost the Authority notes that this is a forward looking [...] cost that appears in Batelco's Tariff Proposal for Residential Broadband packages (TPR88) dated 28 January 2006. The Authority is satisfied that this network element charge includes a cost of capital (CoC) of 12.2 per cent, which is the 2005 WACC.

For the ATM cost the Authority has been able to recalculate this cost from figures in the 2004 Un-audited Accounts. The Authority notes that the ATM cost is 'forward looking' [...\*]'. The INET and international up-links element costs are also forward-looking and based on figures as provided in TPR88 for the 256/64 kbits 2 GB threshold package.

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**Reference Access Offer Order***Business Package*

The Authority has found that that none of Batelco's costing elements presented in the table above for the business package have been derived from the 2004 Un-audited Accounts.

For the DSLAM cost the Authority notes that this cost element, unlike the residential DSLAM cost is based on historic costs but includes a forward-looking cost of capital of 12.2 percent. The Authority is not satisfied that this is the correct methodology of calculating the network element charge for the business DSLAM port. As the Authority is satisfied that the cost of a DSLAM port should not differ between a business and residential subscriber the charge for each port should be similar. Therefore the Authority is satisfied that a forward looking charge of BD[\*] (residential DSLAM port) should apply for the business DSLAM port. No justification has been provided by Batelco why the costs for residential and business DSLAMs should be different in this respect.

The Authority has been able to calculate the ATM transmission costs from the 2004 Un-audited Accounts. However, the Authority notes that Batelco is moving towards a MPLS based transmission network which Batelco states [.....\*](TPR 88 pg30). Therefore the Authority is satisfied that a [\*] percent reduction in ATM charges proposed by Batelco should apply as being fair and reasonable, given that the product will not be available until the MPLS based transmission network is operational and will not be provided over the ATM network.

The INET element charge is directly reconcilable back to Batelco's TPR84 Business Broadband Packages provided by Batelco in November 2005 to support their business broadband tariffs. The Authority notes that despite the charge being based [...\*](TPR 88 pg31)and therefore accepts the current network charge as being fair and reasonable.

The international uplink charge is directly reconcilable back to Batelco's TPR84 Business Broadband Packages. However, the Authority notes that this charge is based on historic costs with a forward-looking CoC of 12.2 percent. The Authority is not satisfied that this is the correct methodology for calculating this network element charge. The Authority notes Batelco's comment in TPR 88 "[...\*]" (pg 32). Taking this into account the Authority is satisfied that a fair and reasonable charge for the international uplink for a forward-looking tariff should include the [\*] % reduction on Batelco's proposed business package charge of BD [\*] as Batelco applied itself to this uplink charge detailed in its residential broadband tariff proposal TPR84.

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For non-network costs the Authority notes that Batelco did not supply any supporting documentation for these costs. Based on figures for the 1 Mbit/s / 256 kbit/s 15 GB threshold package as provided in TPR84, the Authority is satisfied that the Wholesale and After Sales costs constitute legitimate components of the Wholesale Business. However, the Authority is satisfied that it would be fair and reasonable to exclude from the total monthly cost of the package the cost category "Others", as no explanation has been provided by Batelco of the elements that make up this cost to enable the Authority to satisfy itself that the cost is fair, reasonable or non-discriminatory.

In the table below the Authority has recalculated the total monthly cost for both Residential and Business Broadband packages based upon the 2004 Un-audited Accounts, TPR84 and TPR 88.

<b>Costing Element</b>	<b>Residential 256 kbps (5 GB)</b>	<b>Business 1 MB (15 GB)</b>
Local Loop & DSLAM	BD [*]	BD [*]
ATM	BD [*]	BD [*]
INET	BD [*]	BD [*]
International Links	BD [*]	BD [*]
<b>Total Network Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>
After Sale Care	BD [*]	BD [*]
Wholesale	BD [*]	BD [*]
<b>Total Wholesale Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>
<b>Fixed Monthly Cost</b>	<b>BD 14.70</b>	<b>BD 46.17</b>

In the table above, Batelco has also provided cost information on the additional cost incurred per MB above the residential threshold of 5 GB. The cost of this is calculated by Batelco to be [\*] Fils per MB. However, Batelco propose to tariff broadband DSL operators [\*] Fils per MB above the threshold. Batelco does not explain why the tariff per MB above the threshold should be [\*] Fils/MB but the underlying cost is [\*] Fils/MB.

The table below presents the Authority's calculated monthly wholesale charge for the one residential and one business broadband package that appears in the Reference Access Offer. The Authority determines these charges are fair and reasonable for inclusion in the Reference Access Offer:

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<b>Current Residential Package</b>	<b>Current Retail Charge (Price/ Month)</b>	<b>Proposed Wholesale DSL Charge (Price/ Month)</b>
256 kbit/s / 64 kbit/s Residential Broadband 5GB, 30 fils/MB	BD 30	BD 14.70
1 Mbit/s / 256 kbit/s Business Broadband 15GB, 15 fils/MB	BD 150 <sup>(1)</sup>	BD 46.17

(1) Note: Price per month includes CPE of BD [\*] per month.

Supporting Documentation was supplied by Batelco in support of two other Wholesale DSL tariffs. These are described below:

- (i) an agreement processing fee of BD 1,750; and
- (ii) an establishment fee of BD [\*] per Licensed Operator.

Based on an assessment of supporting documentation the Authority is satisfied that the agreement processing fee is fair and reasonable.

Based on an assessment of supporting documentation the Authority is satisfied that the establishment fee is not fair and reasonable.

With respect to the establishment fee, the Authority notes that in a letter from Batelco to the Authority dated 11 December 2004 (Ref: CL/459/04) in support of Wholesale DSL tariffs, Batelco supplied costing information in support of a similar establishment of relationship fee. In this case, the total cost of the fee was spread across the number of ISPs expected to take up the Wholesale DSL service. In the letter Batelco made the assumption that “[a number less than 5\*] ISPs will take up the wholesale DSL service” (at December 2005 8 ISPs were licensed in Bahrain).

In another costing spreadsheet (Ref: 20060706 LLU & BITSTREAMFINAL TRA.xls) supplied by Batelco to the Authority on 6 July 2006 to cover the establishment fee for a Bitstream product Batelco indicated to the Authority that it expected [a number less than five (5)\*] Licensed Operators would take a Bitstream service from Batelco.

Currently in the Kingdom of Bahrain there are 17 licensed ISPs. The Authority considers therefore that it would not be unreasonable to estimate that 5 ISPs would also take up a wholesale DSL service from Batelco.

Therefore, the total number of ISPs to which the establishment fee will apply is five, which the Authority is satisfied results in an establishment fee per ISP of BD 5,000 to recover the establishment costs.

**ORDER No. 2 of 2006****Reference Access Offer Order****(g) Bitstream Service**

The Authority is satisfied that Bitstream refers to the situation where the incumbent installs a high-speed access link to the customer premises and then makes this access link available to third parties, to enable them to provide high-speed services to customers.

Bitstream depends in part on the PSTN and may include other networks such as the ATM network. Bitstream is a wholesale product that consists of the provision of transmission capacity in such a way as to allow new entrants to offer their own, value-added services to their customers. The incumbent may also provide transmission services to an Access Seeker to carry traffic to a 'higher' level in the network hierarchy.

In Batelco's response to the Draft Order dated 31 May 2006 Batelco proposed two (2) Residential and two (2) Business Bitstream products. These wholesale products are described in the table below.

<b>Package/Product</b>	<b>Residential Price/ Month</b>	<b>Business Price/ Month</b>
512 kbps	BD [*]	BD [*]
2 MBps	BD [*]	BD [*]

On 6 July, at the request of the Authority, Batelco provided cost breakdown information for each of the packages outlined above to the Authority in a spreadsheet "20060706 LLU & BITSTREAMFINAL TRA.xls". This cost information is shown below.

<b>Costing Element</b>	<b>Res 512 Kbps</b>	<b>Res 2MB</b>	<b>Bus 512 kbps</b>	<b>Bus 2 MB</b>
DSLAM	BD [*]	BD [*]	BD[*]	BD[*]
Core Transmission	BD [*]	BD [*]	BD [*]	BD [*]
IP Link	BD [*]	BD [*]	BD[*]	BD [*]
Fiber Cable	BD [*]	BD [*]	BD [*]	BD[*]
<b>Total Network Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>
After Sale Care	BD [*]	BD [*]	BD [*]	BD [*]
Wholesale	BD [*]	BD[*]	BD [*]	BD [*]
Others	BD [*]	BD [*]	BD [*]	BD [*]
<b>Total Wholesale Cost</b>	<b>BD [*]</b>	<b>BD[*]</b>	<b>BD[*]</b>	<b>BD [*]</b>

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<b>Costing Element</b>	<b>Res 512 Kbps</b>	<b>Res 2MB</b>	<b>Bus 512 kbps</b>	<b>Bus 2 MB</b>
<b>Access Deficit Charge</b>	<b>BD [*]</b>	<b>BD[*]</b>	<b>BD [*]</b>	<b>BD [*]</b>
<b>Fixed Monthly Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>

The Authority notes that from the costing information supplied on July 6 2006 the Authority has been unable to reconcile this information with those Bitstream charges as proposed by Batelco in its 2 July 2006 response to the Draft Order of 31 May 2006.

The Authority also notes that the Bitstream charges above contain an access deficit charge. The Authority is not satisfied that a fair and reasonable tariff contains an access deficit component – the Authority has not as yet established if an access deficit exists and if so, the quantum of this deficit and how it should be most efficiently funded. In this context, the Authority is not satisfied that it is appropriate for Batelco to be defining, measuring and funding an unproven access deficit through a surcharge on access tariffs

The Authority has found that none of Batelco’s costing elements presented in the table above have been derived from the 2004 Un-audited Accounts.

For the DSLAM costs the Authority notes that these cost elements are based on historic costs but includes a forward-looking cost of capital of 12.2 percent. The authority does not consider this to be the correct methodology of calculating the network element charges for the DSLAM port. As Batelco is currently in the process of replacing its existing DSLAMs with ‘Combi-DSLAM’ the Authority is satisfied that the costs associated with DSLAMS should be forward looking and based on those that appear in Batelco’s Tariff Proposal for Residential Broadband packages (TPR88) dated 28 January 2006.

For the ATM transmission costs, the Authority notes that these cost elements are based on historic costs but include a forward-looking cost of capital of 12.2 percent. The Authority is not satisfied that this is the correct methodology of calculating the network element charge for the ATM network. The Authority notes that Batelco is moving towards a MPLS based transmission network which Batelco states “[..\*]” (TPR 88 pg 30). Therefore the Authority is satisfied that a [\*] percent reduction in ATM charges proposed by Batelco should apply as being fair and reasonable, given that the bitstream product will not be available until the MPLS based transmission network is operational and will not be provided over the ATM network.

The Authority is satisfied that both the IP link and Fiber cable charges are fair and reasonable as they are based on forward looking costs.

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For non-network costs the Authority notes that Batelco did not supply any supporting documentation for these costs. Based on figures for the 1 Mbit/s / 256 kbit/s 15 GB threshold package as provided in TPR84, the Authority is satisfied that the Wholesale and After Sales costs constitute legitimate components of the Wholesale Business. However, the Authority is satisfied that it would be fair and reasonable to exclude from the total monthly cost of the package the cost category “Others”, as no explanation has been provided by Batelco of the elements that make up this cost to enable the Authority to satisfy itself that the cost is fair, reasonable or non-discriminatory.

In the table below the Authority has recalculated the total monthly cost for both Residential and Business Bitstream services, which result in total fixed monthly costs which the Authority determines should apply for the relevant Bitstream services.

<b>Costing Element</b>	<b>Res 512 Kbps</b>	<b>Res 2MB</b>	<b>Bus 512 kbps</b>	<b>Bus 2 MB</b>
DSLAM	BD [*]	BD [*]	BD [*]	BD [*]
Core Transmission	BD [*]	BD[*]	BD [*]	BD [*]
IP Link	BD [*]	BD [*]	BD [*]	BD [*]
Fiber Cable	BD [*]	BD [*]	BD [*]	BD [*]
<b>Total Network Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>
After Sale Care	BD [*]	BD [*]	BD [*]	BD [*]
Wholesale	BD [*]	BD [*]	BD [*]	BD [*]
<b>Total Wholesale Cost</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>	<b>BD [*]</b>
<b>Fixed Monthly Cost</b>	<b>BD 14.73</b>	<b>BD 40.10</b>	<b>BD 17.43</b>	<b>BD 49.13</b>

Supporting Documentation was supplied by Batelco on 6 July and 10 July in support of three other Bitstream services tariffs. These are described below:

- (i) an establishment fee of BD [\*] payable once only;
- (ii) an agreement processing fee of BD [\*] payable once only; and
- (iii) a maintaining relationship charge of BD[\*] per Licensed Operator per month.

The Authority’s analysis of each of these charges is examined in detail below.

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**Establishment Fee**

Batelco's Establishment fee of BD [\*] is a once payable charge by each Licensed Operator to support Batelco's proposed product development cost of the Bitstream service. The total cost of the establishment fee is outlined below.

Product Development	Department	GRADE	Effort in Man Days	Rate per Man-day (BD)	Total Cost (BD)
Internal Development cost	Wholesale Dept	[*]	[*]	[*]	[*]
		[*]	[*]	[*]	[*]
		[*]	[*]	[*]	[*]
	Internet & Messaging Product Mngt	[*]	[*]	[*]	[*]
	Transmission	[*]	[*]	[*]	[*]
	Costing	[*]	[*]	[*]	[*]
		[*]	[*]	[*]	[*]
	Regulatory Affairs	[*]	[*]	[*]	[*]
IT Systems Configuration Cost	CRM	[*]	[*]	[*]	[*]
	TBMS	[*]	[*]	[*]	[*]
External Consultation Cost	External Consultant	[*]	[*]	[*]	[*]
Capital Systems Cost	CRM and TBMS		[*]	[*]	[*]
		<b>Total</b>	[*]	[*]	[*]

Batelco has estimated combined Application Development costs of BD [\*]. The following table has been supplied by Batelco to support this cost.

Application Development	Effort in Man Days	Rate per Man-day (BD)	Cost Estimate (BD)
CRM	[*]	[*]	[*]

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<b>Application Development</b>	<b>Effort in Man Days</b>	<b>Rate per Man-day (BD)</b>	<b>Cost Estimate (BD)</b>
TBMS	[*]	[*]	[*]
EAI	[*]	[*]	[*]
EDW	[*]	[*]	[*]
SAP	[*]	[*]	[*]
Remedy	[*]	[*]	[*]
CSS	[*]	[*]	[*]
CATS	[*]	[*]	[*]
Other systems	[*]	[*]	[*]
Requirements finalization by all concerned IT managers and IS specialists, testing & verifications.	[*]	[*]	[*]
<b>Total</b>	[*]	[*]	[*]
Project management costs of [*]% of capital costs	[*]	[*]	[*]
<b>Total costs</b>	[*]	[*]	[*]

The Authority is satisfied that a number of aspects of this charge are not fair and reasonable. These are outline below:

- (i) Batelco proposes a total of [\*] man-days (1 person working full time) or [\*] man-years to develop the Bitstream product. In a letter to Batelco from the Authority dated 6 July 2006 (Ref: ERU/0706/161), the Authority asked Batelco to “to provide supporting documentation for the ‘Durations in mths’ required for those costs as outlined in the table [above]”. Batelco’s did not, in its letter (Ref: CL/200/06) or spreadsheet (Ref: 20060710\_LLU&Bitstreamfinal (version4).xls), both dated 10 July 2006, provide any supporting documentation to account for the [\*] man-days required to develop the Bitstream product.
- (ii) Batelco proposes an average daily rate of BD [\*] of each of the [\*] man days. This is considerably higher than the daily rate for any of Batelco’s Grades (the highest being BD [\*] per day). Therefore, the Authority is satisfied that a average daily rate of BD [\*] would equate to either a Consultant (at BD [\*] per day) or an Senior Manager (SM- BD [\*] per day) being

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employed for every day of the [\*] man-days required by Batelco to set up the Bitstream product.

- (iii) The largest component of the charge is BD [\*], classified by Batelco as being capital costs for Transaction Business Management System (“TBMS”) and Customer Relationship Management (“CRM”) systems. Batelco proposes that this set-up charge will involve [\*] man-days at an average daily rate of BD [\*]. An average daily rate of BD [\*] is slightly below the rate charged by external consultants to Batelco (average daily rate of BD[\*]). Therefore, an average daily rate of BD [\*] to set-up the TBMS and CRM systems equates to the employment of a consultant only for the majority of the [\*] man-days required to set up the system.

Below the Authority assesses each of Batelco’s set-up charges for the Bitstream product.

**Application Development Charges**

Batelco has previously supplied documentation to the Authority in the form of supplier price quotes in support of Carrier Pre-selection (CPS) charges. In particular, in a fax dated 1st February 2005 (ref CL/481/05) Batelco states:

[...\*]

The Authority is satisfied that there should be close parallels in terms of CRM and TBMS costs for Bitstream as for carrier pre-selection (“CPS”).

The Authority understands that Batelco’s CRM system is provided by [name of company\*]. In support of CPS charges, Batelco supplied a quote from [name of company\*] of BD [\*] to modify the CRM system. This was based on an estimate of [\*] person days at BD [\*] per day. This is the man-day rate that Batelco have applied in the table above. Therefore the Authority accepted Batelco’s CRM system charge of BD [\*] (includes Batelco’s standard [\*]% planning costs) for [\*] man-days. Batelco’s TBMS system is supplied by [name of company\*]. For CPS, [name of company\*] provided a quote of BD [\*]. Allowing for Batelco’s standard [\*]% planning costs, the Authority is satisfied that the total TBMS costs for Bitstream should be no higher than BD [\*]. Consequently the Authority is satisfied that the total CRM/TBMS system set-up costs for Bitstream, based on quotes received for carrier pre selection CPS, could be fairly and reasonably set at BD[\*].

For the remaining charges (Enterprise Application Integration (“EAI”) to Requirements Finalization) no supporting documentation was provided by Batelco to explain the charges. For one of the charges- EDW- the Authority notes that this charge has been described by Batelco (Ref:

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CL/481/105) as being “The Electronic Data Warehouse (EDW) provides on CPS traffic” (pg 3). In this context the Authority is not satisfied that an EDW charge is relevant to a Bitstream service.

**Other Setup costs**

Other set-up costs involved in modifying Batelco’s Costing system to cost Bitstream services are as follows:

- (i) Batelco’s Wholesale Department - Batelco estimates [\*] person months at a cost BD [\*]. Batelco provides no supporting documentation for these estimates. This represents [\*] percent of total set-up costs. The Authority notes that in CPS charges Batelco had a Wholesale Department cost of BD [\*] which represented [\*] percent of total set up costs.
- (ii) Costing Department Costs - Batelco estimates that this will take [\*] person months and cost BD [\*]. Batelco provides no supporting documentation for these estimates. The Authority notes that no Costing Department costs were included by Batelco in calculating its CPS system set-up costs.
- (iii) Regulatory Affairs Department Costs - Batelco estimates that this will take [\*] person months and cost BD [\*]. Batelco provides no supporting documentation for these estimates. The Authority notes that no Regulatory Affairs Department costs were included by Batelco in calculating its CPS system set-up costs.
- (iv) External Consultant Charges - Batelco estimates it would require the services of an external consultant for [\*] months in order to complete the set-up process at a total cost of BD [\*]. Batelco has not provided adequate supporting documentation to explain the functions of an external consultant. Therefore the Authority considers that this cost should be rejected on the basis of inadequate supporting documentation.

Based on CPS charging the Authority accepts Batelco’s set-up charges for Transmission Costs, IT System Configuration Costs and Internal Development Costs. The set-up charges the Authority is satisfied as being fair and reasonable to include in the establishment of a relationship charge are contained in the table below:

<b>Product Development</b>	<b>Department</b>	<b>GRADE</b>	<b>Effort in Man Days</b>	<b>Rate per Man-day (BD)</b>	<b>Total Cost (BD)</b>
Internal Development cost	Wholesale Department	[*]	[*]	[*]	[*]
	Internet & Messaging Product Mngt	[*]	[*]	[*]	[*]

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<b>Product Development</b>	<b>Department</b>	<b>GRADE</b>	<b>Effort in Man Days</b>	<b>Rate per Man-day (BD)</b>	<b>Total Cost (BD)</b>
	Transmission	[*]	[*]	[*]	[*]
IT Systems Configuration Cost	CRM	[*]	[*]	[*]	[*]
	TBMS	[*]	[*]	[*]	[*]
Capital Systems Cost	CRM and TBMS	[*]	[*]	[*]	[*]
		[*]	[*]	[*]	[*]

The Authority is satisfied that a similar planning horizon of 5 years for set-up, operating and capital costs of CPS should also apply to the Bitstream service. Therefore, the Authority is satisfied that Batelco's proposal of spreading the set-up costs over [\* a number less than 5] Licensed Operators in a 5-year period is conservative, given that there are currently 17 licensed ISPs in Bahrain. The Authority is satisfied that at least one (1) Licensed Operator will purchase the Bitstream service from Batelco for each of the 5 years, giving a total of 5 Licensed Operators over the 5-year planning horizon.

Assuming five Bitstream operators, the Authority is satisfied that a fair and reasonable establishment of relationship fee to be a one-off payment of BD 50,497 per Licensed Operator.

The Authority notes that this establishment fee of BD 50,497 may represent a significant barrier to entry for ISP wishing to purchase the Bitstream service from Batelco. The Authority is therefore satisfied that Licensed Operators should be given the option of paying a one-off fee of BD 50,497 or paying an alternative amortized fee (at Batelco's 2005 WACC of 12.2 percent) of BD14,189 per Bitstream operator per year over a 5-year period (Total payment per Bitstream operator of BD 70,943).

**Agreement Processing Fee**

Batelco's agreement processing fee of BD [\*] is a one-off charge per Bitstream operator to cover the costs incurred by Batelco in processing a Bitstream contract. This charge is broken down by Batelco as set out in the table below.

<b>GRADE</b>	<b>Effort in Man Days</b>	<b>Rate per Man-day (BD)</b>	<b>Total Cost (BD)</b>
SP	[*]	[*]	[*]
G1	[*]	[*]	[*]

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<b>GRADE</b>	<b>Effort in Man Days</b>	<b>Rate per Man-day (BD)</b>	<b>Total Cost (BD)</b>
Consultant	[*]	[*]	[*]
<b>Total</b>	[*]		[*]

The Authority notes that Batelco supplied no supporting documentation for the number of man days required to process a Bitstream agreement.

The Authority is satisfied that the charges set out in the Reference Access Offer should reflect the situation in which an Access Seeker accepts the service and terms and conditions as set out in the appropriate schedule and does not propose to amend or modify either the service required or terms and conditions. In this case the Authority is concerned that it should take Batelco [\*] days to process a standard agreement. The Authority is concerned that an external consultant needs to be involved in processing what is a standard contract.

The Authority recognizes that internal resources will be required to process a standard agreement and accepts Batelco's estimate of [\*] days. However, the Authority does not accept that an external consultant would be required to process a standard agreement. As a result the Authority is satisfied that the agreement processing fee should be set at BD 1,406 per agreement, discounting the costs of any external consultants.

**Maintaining Relationship Charge**

Batelco's agreement processing fee of BD [\*] is a recurring monthly charge (BD [\*] annually) payable by every Bitstream operator. The Authority notes that in its 6 July supporting documentation Batelco calculated a maintaining relationship charge of BD [\*] per operator per month. The Authority notes that in its 10 July supporting documentation the maintaining relationship charge was BD [\*]. This charge is broken down by Batelco as set out in the table below.

<b>GRADE</b>	<b>Effort in Man Days</b>	<b>Rate per Man-day (BD)</b>	<b>Total Cost (BD)</b>
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]			[*]
<b>Total</b>			[*]

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Batelco's IT maintenance cost of BD [\*] is broken down in Batelco's 10 July supporting documentation as set out in the table below.

<b>Application Development</b>	<b>Annual Cost (BD)</b>	<b>Monthly Cost (BD)</b>
CRM	[*]	[*]
TBMS	[*]	[*]
EAI	[*]	[*]
EDW	[*]	[*]
SAP	[*]	[*]
Remedy	[*]	[*]
CSS	[*]	[*]
CATS	[*]	[*]
Other systems	[*]	[*]
<b>Total</b>	[*]	[*]

The Authority notes that the monthly cost of BD [\*] set out in the table is the *total* monthly cost as calculated by Batelco and not the cost per operator.

The Authority notes that no supporting documentation for EAI, EDW, SAP, remedy, CSS, CATS and "other systems" was supplied by Batelco. The Authority therefore does not accept the IT maintenance cost associated with such systems.

For CRM and TBMS the Authority is satisfied that the associated IT maintenance costs are as follows

<b>Application Development</b>	<b>Annual Cost (BD)</b>	<b>Monthly Cost (BD)</b>
CRM	[*]	[*]
TBMS	[*]	[*]
<b>Total</b>	<b>63,516</b>	<b>3,155</b>

This total IT maintenance charge of BD 3,155 per month should be recovered from each Bitstream operator a charge per operator of BD 631 per month.

Therefore, the Authority is satisfied and so determines that the following is an appropriate fair and reasonable monthly maintaining relationship charge, per operator.

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<b>GRADE</b>	<b>Effort in Man Days</b>	<b>Rate per Man-day (BD)</b>	<b>Total Cost (BD)</b>
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]	[*]	[*]	[*]
[*]			[*]
<b>Total</b>			<b>813</b>

### 6.5 **Setting tariffs for the Wholesale DSL and Bitstream Services**

The Authority has set tariffs for a Bitstream Service and for the wholesale equivalent of those retail DSL broadband packages that Batelco does not currently include in the Wholesale DSL Service in the Reference Access Offer.

In calculating the charges for both the Wholesale DSL and Bitstream Services the Authority has in every instance attempted to use cost information from Batelco's 2004 accounts. Where this has not been possible, the Authority has relied on cost information supplied to it by Batelco which, if required, the Authority has corrected so as to be supported by the 2004 Un-audited Accounts.

More precisely, for the wholesale tariffs the Authority has used TPR88 submitted by Batelco to the Authority on 28 January 2006 and which includes cost information relating to all of Batelco's current Residential Broadband Packages. The Authority notes that for the one residential package that currently appears in the Reference Access Offer Batelco has used network component costs that reconcile with TPR88.

In a meeting that took place between the Authority and Batelco on 16 May 2006 to discuss Reference Access Offer costs, Batelco indicated that costing information from TPR [.....\*] was appropriate to assess [....\*] tariffs. On 17 May 2006 the Authority sent an email to Batelco asking for confirmation of this. Batelco responded in a letter of 18 May 2006 (Ref: CL/136/06) in which they stated "Batelco does accept that the Authority can take note of the retail tariff proposal cost information providing it takes into account and makes [.....\*]".

For the business broadband packages, the Authority has used cost information from TPR84 – Business Broadband Packages as supplied by Batelco to the Authority on 22 November 2005.

In Batelco's letter to the Authority of 18 May 2006 Batelco stated that "Batelco would object if the Authority were to take the [\*] directly into account in assessing wholesale and/or access pricing", but did not provide any reasons for its objection.

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The Authority notes these concerns but is aware that for the one business package that currently appears in the Reference Access Offer Batelco has used network element costs that reconcile with TPR84 and as such does not see any grounds why it should not do so for the purposes of this Order.

On 6 July 2006 Batelco also provided a costing spreadsheet to the Authority (Ref: 20060706 LLU & BITSTREAMFINAL TRA.xls) to support their proposed residential and business Bitstream packages. On 10 July 2006 Batelco provided a further spreadsheet (Ref: 20060706 LLU & BITSTREAMFINAL (version 4).xls) to support the one send on 6 July 2006. Where appropriate the Authority has also used these spreadsheets in determining both DSL Wholesale and Bitstream charge.

In the following section the Authority has calculated all tariffs that apply to Wholesale DSL Services and a Bitstream Service.

(a) **Expanded Wholesale DSL Services**

The table below gives an outline of the cost components used in determining the wholesale charge for the expanded wholesale DSL services and their source.

<b>Costing Element</b>	<b>Residential Source</b>	<b>Business Source</b>
CPE	NA	TPR [*]
Local Loop & DSLAM	TPR [*]	[*]
ATM	TPR [*]	[*]
INET Platform	TPR [*]	TPR [*]
International Links	TPR [*]	TPR [*]
After Sale Care	Batelco	Batelco
Wholesale	Batelco	Batelco
Other	Omitted	Omitted

In calculating the tariffs for the expanded package of wholesale DSL services the Authority has used the following methodology:

*Residential Packages:*

All network component costs were sourced from TPR88 and appear fair and reasonable to the Authority.

The Authority accepted that the Wholesale and After Sales costs constitute legitimate components of the Wholesale Business and have incorporated those non-network charges as provided by Batelco for the residential wholesale DSL package that appears in the Reference Access Offer.

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For each of the network element costs listed in the table below the Authority has used Batelco's TPR84 as the starting point. Each element cost has been 'adjusted' to make these costs forward looking and to account for the fact that in TPR84 Batelco has used a combination of historic costs and forward looking cost of capital which the Authority considers to be an incorrect methodology to calculate charges for these network components.

The adjustments have been made to account for the fact that Batelco is in the process of installing combi-DSLAMS and MPLS networks to replace the existing DSLAMS and ATM network. This will result in a lower cost/ more efficient network architecture.

Each adjustment as undertaken on the network elements in the table below has been discussed in detail in Section 5.4(f).

<b>Element</b>	<b>Forward Looking</b>	<b>Cost of capital (%)</b>	<b>Adjustment</b>
DSLAM	YES	12.2	[*]
ATM	YES	12.2	[*]
INET Platform	-	-	[*]
International Platform	YES	12.2	[*]

The Authority accepted that the Wholesale and After Sales costs constitute legitimate components of the Wholesale Business and have incorporated those non-network charges as provided by Batelco for the business Wholesale DSL package that appears in the Reference Access Offer.

The table below presents the Authority's calculated monthly wholesale costs for each of the additional broadband packages, which it determines would be fair and reasonable for inclusion in the Reference Access Offer:

<b>Current Residential Package</b>	<b>Current Retail Charge (Price/ Month)</b>	<b>Proposed Wholesale DSL Charge (Price/ Month)</b>
512 kbit/s / 128 kbit/s Residential Broadband 8GB, 10 files/MB	BD 30	BD 19.18

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<b>Current Residential Package</b>	<b>Current Retail Charge (Price/ Month)</b>	<b>Proposed Wholesale DSL Charge (Price/ Month)</b>
1 Mbit/s / 256 kbit/s Residential Broadband 15GB, 10 fils/MB	BD 40	BD 32.02
2 Mbit/s / 512 kbit/s Residential Broadband 20GB, 10 fils/MB	BD 60	BD 41.90
256 kbit/s / 64 kbit/s Business Broadband 2.5GB, 15 fils/MB	BD 40	BD 14.38
256 kbit/s / 64 kbit/s Business Broadband 5GB, 15 fils/MB	BD 80 <sup>(3)</sup>	BD 17.34
512 kbit/s / 128 kbit/s Business Broadband 10GB, 15 fils/MB	BD 100 <sup>(3)</sup>	BD 30.48
2 Mbit/s / 512 kbit/s Business Broadband 20GB, 15 fils/MB	BD 200 <sup>(3)</sup>	BD 69.88
256 kbit/s / 64 kbit/s Business Broadband Unlimited	BD 140 <sup>(3)</sup>	BD 38.45
512 kbit/s / 128 kbit/s Business Broadband Unlimited	BD 200 <sup>(3)</sup>	BD 56.52
1 Mbit/s / 256 kbit/s Business Broadband Unlimited	BD 250 <sup>(3)</sup>	BD 77.74
2 Mbit/s / 512 kbit/s Business Broadband Unlimited	BD 350 <sup>(3)</sup>	BD118.27

<sup>3</sup> Price per month includes CPE of BD [\*]per month.

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(b) **Expanded Bitstream Tariffs**

In the Reference Access Offer Batelco did not offer to provide a Bitstream service for the following speeds:

- (i) Residential 256 kbps;
- (ii) Residential 1Mbps;
- (iii) Business 256 kbps; and
- (iv) Business 1 Mbps.

As Batelco currently offer these speeds in the retail market, except the residential 256 kbps, which Batelco includes as a Wholesale DSL service in the Reference Access Offer, the Authority is satisfied that an equivalent wholesale bitstream product should be made available at these speeds for the reasons set out above in this Order.

The table below gives the underlying source of the cost components used by the Authority in determining the wholesale charge for the Bitstream services that Batelco did not propose to include in the Reference Access Offer.

<b>Costing Element</b>	<b>Residential Source</b>	<b>Business Source</b>
DSLAM	TPR [*]	TPR [*]
Core Network	[*]	[*]
IP Link	[*]	[*]
Fiber Cable	[*]	[*]
After Sale Care	Batelco	Batelco
Wholesale	Batelco	Batelco
Other	Omitted	Omitted

The DSLAM network component costs are sourced from TPR[\*] and the Authority is satisfied that these are fair and reasonable because they are forward looking. The Authority is satisfied that the 'Combi-DSLAM' cost includes a forward looking cost of capital of 12.2 per cent.

The Core Network charges are based on those that appear in[...\*]. These core network charges, however, use a combination of historic costs and forward looking cost of capital which the Authority is satisfied is an incorrect methodology to calculate charges for these network components. The Authority notes that Batelco is

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moving towards a MPLS based transmission network which Batelco states “[\*...]. The Authority is satisfied that a [\*] percent reduction in Core Network charges proposed by Batelco should apply as being fair and reasonable for business packages, given that the service will not be available until the MPLS network is operational and will not use the ATM network.

For residential speeds the Authority is satisfied that a further [\*] percent reduction in Core Network costs should apply to take account of the difference in the contention ratio between residential and business speeds as listed in the table below. The contention ratio reflects the lower transmission bandwidth required for residential compared to business packages.

<b>Speed</b>	<b>Package</b>	<b>Contention Ratio</b>
256 kbps	Residential	10:1
512 kbps	Residential	10:1
1 MB	Residential	10:1
2 MB	Residential	10:1
256 kbps	Business	8:1
512 kbps	Business	8:1
1 MB	Business	8:1
2 MB	Business	8:1

The Authority is satisfied that the Wholesale and After Sales costs constitute legitimate components of the Wholesale Business and have incorporated those non-network charges as provided by Batelco for the residential wholesale DSL package that appears in the Reference Access Offer.

Upon these bases, the Authority has calculated fair and reasonable monthly Bitstream tariffs which it determines should form part of the Reference Access Offer. These are shown in the table below.

<b>Packages – Residential</b>	<b>Bitstream Charge (Price/ Month)</b>
256 kbit/s / 64 kbit/s	BD 10.49
1 Mbit/s / 256 kbit/s	BD 23.18
<b>Packages – Business</b>	
256 kbit/s / 64 kbit/s	BD 12.13

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<b>Packages – Residential</b>	<b>Bitstream Charge (Price/ Month)</b>
1 Mbit/s / 256 kbit/s	BD 27.99

**7. Public Notice**

On 9 April TRA issued a Public Notice asking for operators to comment on Batelco's services that appear in the Reference Access Offer. The Public Notice received five responses.

In summary the majority of operators had concerns relating to:

- 7.1 the inflexibility of Batelco's Wholesale DSL package, which does not allow operators to differentiate their service from Batelco's;
- 7.2 the Wholesale Packages as offered in the Reference Access Offer being available only at the lowest of Batelco's Business and Residential Speeds; and
- 7.3 bitstream access through interconnection at the DSLAM, ATM or MPLS access or the Managed IP network not being outlined in the Reference Access Offer.

In introducing the new services in the Reference Access Offer the Authority has taken these concerns into consideration. The Authority is satisfied that the inclusion of the services above in the Reference Access Offer will fulfill the current requirement from Licensed Operators for Access Services in Bahrain

The Authority also notes that respondents had further concerns relating to in unavailability in the Reference Access Offer of:

- (a) local loop unbundling in the form of access to the MDF;
- (b) DSLAM co-location; or
- (c) access to dark fiber.

Despite requests from Licensed Operators for these three services, the Authority at this stage and without prejudice to future reference access offers is of the view that these services are currently not necessary services to address the current requirement of Access Seekers in Bahrain. The Authority is satisfied that the scope of the Facilities Access Service to be offered by Batelco, including the offer of Duct sharing/Duct access and collocation at local exchanges, is for the purposes of this Reference Access Offer and this offer alone adequate. However, the Authority does not preclude these services appearing in future reference access offers if the Authority subsequently decides that one or more of them are warranted or if it appears the lack of such services is restricting or preventing competition in the Bahrain telecommunications market or that the services currently described in the Reference Access Offer, as amended by this Order, are not being effectively provided so as to require alternatives to be made available.

The Authority is satisfied that as the responses it received to the Public Notice are confidential, these cannot be disclosed to Batelco as requested in the Response. In addition, the Authority has ensured that any issues which are prejudicial to Batelco

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and on which the Authority has sought to rely have been included in the Draft Order to Batelco so that it could respond without being prejudiced in any form or manner. Similarly, the Authority is satisfied that it cannot conduct a full and meaningful consultation with the industry for the purposes of section 3(f) of the Telecommunications Law on the Reference Access Offer, as requested by the Response, unless it receives a waiver in writing from Batelco on the disclosure of Batelco confidential information, including costs information, submitted to the Authority as part of the approval process for the Reference Access Offer. Thus if Batelco wishes for the next reference access offer it will submit to the Authority, it can waive its confidentiality about its costing information and submissions so that Licensed Operators may comment upon them.

**IN THE EXERCISE OF ITS POWERS UNDER SECTION 57 OF THE TELECOMMUNICATIONS LAW AND THE ACCESS REGULATION, THE AUTHORITY MAKES THE FOLLOWING ORDER:**

**1. Reference Access Offer Terms and Conditions**

The Authority determines that Batelco shall amend those terms and conditions of its Reference Access Offer specified and as set out in Annex 1 to this Order.

**2. Reference Access Offer Tariffs**

The Authority determines that Batelco shall amend those tariffs of its Reference Access Offer as specified and set out in Annex 2 to this Order.

**3. Reference Access Offer Publication**

Batelco shall publish the Reference Access Offer as determined by this Order within fourteen (14) calendar days of the effective date of this Order, pursuant to Article 5.5 of the Access Regulation.

**4. Compliance**

Pursuant to Article 5.3 of the Access Regulation the Authority hereby warns Batelco that any failure to comply with the terms of this Order will constitute a material breach of Batelco's national fixed services license, which may then be revoked pursuant to the terms of section 35 of the Telecommunications Law.

**5. Entry into force**

This Order shall enter into force on 12 July 2006, which shall be the effective date for the purposes of section 57 of the Telecommunications Law and Article 5.4 of the Access Regulation.

A. Andreas Avgousti

General Director

for and on behalf of the Telecommunications Regulatory Authority

12 July 2006

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**Annex 1 to the Reference Access Offer Order**

This Annex consists of three parts: Part 1 tabulates amendments to be made to the terms and conditions Reference Access Offer other than as set out in Parts 2 and 3; Part 2 sets out a replacement Annex 2 for the Wholesale DSL Service; and Part 3 sets out the new service descriptions required by the Authority.

**Part 1**

**Tabulated Amendments**

In the following table, Services Descriptions are abbreviated in the first column as follows:

**“CPS SD”** = Carrier Pre-Selection Access Service – Service Description;

**“CAT SD”** = Customer Access Tail (CAT) Service – Service Description;

**“DIAS SD”** = Dial-Up Internet Access Service – Service Description;

**“ITAS SD”** = Inter-Operator Transit Access Service – Service Description;

**“PSTNTS SD”** = PSTN Transit Service – Service Description;

**“IPLC SD”** = International Private Leased Circuit Service – Service Description;

**“LLCO SD”** = Local Leased Circuit for OLO – Service Description; and

**“WDSL SD”** = Wholesale DSL Service – Service Description.

In this Order, insertions required by the Authority are shown in bold italics with double underline; deletions required by the Authority are shown in bold italics with strikethrough.

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Schedule/Clause	Amended Sentence/Paragraph
<b>Carrier Pre-Selection Access Service</b>	
CPS SD Introduction (new sub-paragraphs – deleted from Paragraph 2)	<b><u>Availability: Public telecommunications operators with the necessary individual license for local fixed network services or for international services, or both (as the case may be) and one or more interconnection links.</u></b> <b><u>Traffic: Local and/or international traffic (as the case may be) other than for excluded traffic.</u></b>
CPS SD Paragraph 2	<b><u>Code of Practice means the “Code of Practice on Carrier Pre-Selection” issued by the Regulator on 29 November 2005.</u></b>
CPS SD Paragraph 2	CPS Customer means an End User <del>who is in good standing in respect of a Bateleo exchange line who: (i) has elected to acquire the National Services Basket or International Services Basket or both from the Access Seeker; and (ii) has properly been the subject of a Transfer Request to whom the Access Seeker provides a Pre-Selectable Service.</del>
CPS SD Paragraph 2	Invalid Transfer means a PreSelection Transfer: (a) which is not authorized by a valid Customer Consent <b><i>given by the End User in writing</i></b> ; or (b) which resulted from a processing error.
CPS SD Paragraph 2	Override Call means a <b><u>Telephone</u></b> Call in which the Calling Party has used Override.
CPS SD Paragraph 3	3.2 <b><u>Resupply Code of Practice</u></b> <b><u>The Access Seeker must not supply the Carrier PreSelection Access Service for resale. The parties shall use all reasonable endeavors to comply with the Code of Practice, provided that neither party shall be obliged to comply with any provision of the Code of Practice that is inconsistent with the Regulation.</u></b>  3.3 <b><u>Interception Deleted.</u></b> <b><u>Access Seeker must comply with interception obligations under the Telecommunications Law or its relevant licence in relation to the Carrier PreSelection Service.</u></b>

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CPS SD Paragraph 3.5	The Access Seeker shall convey PreSelected Calls from the Point of Interconnection to the <del>called party</del> <b><u>Called Party</u></b> such that on receipt of the initial digits of the <del>called party</del> <b><u>Called Party</u></b> 's telephone number, the Access Seeker shall:  (a) immediately proceed to connect the calling party to the <del>called party</del> <b><u>Called Party</u></b> ; and
CPS SD Paragraph 4.2	The Access Seeker must supply monthly forecasts for Transfer Requests, in the form <b><u>reasonably</u></b> required by Batelco from time to time, which forecasts shall:
CPS SD Paragraph 5.2	<del><b><u>Warranties-Undertakings</u></b></del> The Access Seeker <del>warrants</del> <b><u>shall use all reasonable endeavors to ensure</u></b> that:
CPS SD Paragraph 5.2(a)(iii)	<del><b><u>it has used reasonable endeavors to ensure that</u></b></del> the information in the Operator Transfer Request is correct;
CPS SD Paragraph 5.2(b)	In respect of each PreSelection Transfer, the Access Seeker <del>warrants</del> <b><u>undertakes</u></b> that it has obtained <del>or used</del> <b><u>all reasonable endeavors to obtain</u></b> the End User's acknowledgment that implementation of the PreSelection Transfer may mean that Incompatible Services cannot be supplied to the End User by the Preselected Operator.
CPS SD Paragraph 7.3 (new paragraph)	<b><u>Maintenance</u></b> <b><u>Access Provider shall provide maintenance and support services in respect of each End User's direct exchange line in connection with the Carrier PreSelection Access Services in accordance with good industry standard to at least the service levels provided for all other direct exchange lines provided by the Access Provider.</u></b>

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Schedule/Clause	Amended Sentence/Paragraph
CPS SD Annexure 2	<p><b>EXCLUDED CALLS</b></p> <p>The following is the initial list of Excluded Calls for the purposes of this Service Description for the Carrier PreSelection Access Service. This list may be modified from time to time by the Access Provider with the consent of the Regulator:</p> <ol style="list-style-type: none"> <li>1. calls to emergency services;</li> <li>2. calls to short codes;</li> <li>3. calls to flat-rate internet access services;</li> <li>4. calls to a number range in the National Numbering Plan associated with special or premium rate services;</li> <li><del>5. calls to a number range in the National Numbering Plan associated with mobile network services;</del> and</li> <li><u>6</u>5. calls which use or rely on any pre-paid or real-time authentication system of the Access Provider or a third party operator other than the Access Seeker;</li> </ol>

Schedule/Clause	Amended Sentence/Paragraph
<b>Customer Access Tail (CAT) Service</b>	
CAT SD Paragraph 2	<p><b>End User Premises</b> means a permanent physical location in Bahrain owned or controlled by a person or organization who is neither a licensee, nor affiliated to or controlled by a licensee, and from which location that person <del>conducts business and</del> receives telecommunication services.</p>
CAT SD Paragraph 3.1	<p><del><b>Prerequisite Deleted.</b></del></p> <p><del><b>The Access Provider is not required to provide the CAT Service unless and until there are in place between the Access Provider and Access Seeker Supply Terms acceptable to the Access Provider.</b></del></p>

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Schedule/Clause	Amended Sentence/Paragraph
CAT SD Paragraph 3.2I	The CAT Service is available at the bandwidths and Charges set out below, subject to availability of capacity <b><u>determined in accordance with the Access Provider's Priority Policy.</u></b>
CAT SD Paragraph 3.2A (new paragraph)	<p><b><u>3.2A Priority Policy</u></b></p> <p><b><u>(a) The Access Provider shall develop, disclose to the Access Seeker and subsequently apply a policy (the "Priority Policy") for CAT Service applications within twenty-one (21) days of the date of the first service request for CAT Service from the Access Seeker or any other Licensed Operator.</u></b></p> <p><b><u>(b) The Priority Policy shall be consistent with the following principles:</u></b></p> <p style="padding-left: 40px;"><b><u>(i) the Priority Policy of the Access Provider must be non-discriminatory between Access Seeker and other access seekers for CAT Services;</u></b></p> <p style="padding-left: 40px;"><b><u>(ii) the Priority Policy must apply on a non-discriminating basis to the provisioning of accepted CAT Service applications and the Access Provider's own internal confirmed orders, requirements and plans for each affected CAT; and</u></b></p> <p style="padding-left: 40px;"><b><u>(iii) subject to sub-paragraph (i) above, the Access Provider must seek to maximize the efficiency of its Priority Policy.</u></b></p>
CAT SD Paragraph 3.4(b)	On termination <b><u>other than as a result of the default of either party, subject to the Access Provider using all reasonable endeavors to reuse the relevant CAT, either for its own purposes or in the supply of CAT Service to another person,</u></b> the Access Seeker must pay to Access Provider by way of liquidated damages the charges for the CAT Service until the end of the notification period or the <del>Minimum</del> <b><u>minimum</u></b> Service Period, whichever is greater, <b><u>or until the date in that greater period from which the relevant CAT is reused.</u></b>
CAT SD Paragraph 3.5(d)	<del><b><u>This CAT Service is for the Access Seeker's own use only in respect of services which it provides to its customers in accordance with its licence and clause 12 of the Supply Terms of Bateleo's Reference Offer which is incorporated into this Service Description if it does not already form part of an agreement for Supply between the Access Seeker and the Access Provider. For the avoidance of doubt, the Access Seeker must not re-supply, hire, transfer ownership, assign, trade or engage in simple resale of this CAT Service to third parties.</u></b></del> <del><b><u>Deleted.</u></b></del>

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Schedule/Clause	Amended Sentence/Paragraph
CAT SD Paragraph 3.7 (new paragraph)	<b><u>Maintenance</u></b> <b><u>Access Provider shall provide maintenance and support services in respect of each CAT in accordance with good industry standards and to at least the service levels provided for all other circuit transmission capacity for digital point-to-point communications on its Network.</u></b>
CAT SD Paragraph 4(e)	<b>Availability Charges:</b> Additional Charges may apply where <u>the Access Seeker's</u> specific <b><u>and non-industry standard</u></b> installation requirements must be met or where a contract period is less than the minimum <del>service period</del> <b><u>Service Period</u></b> . Charges are for CAT Services carried over Access Provider's normal transmission and cable routes. CAT Services <b><u>that can only be</u></b> provided over other transmission and cable routes are subject to case by case discretion and, if offered, individual quotation. CAT Services provided over other transmission facilities and routes are subject to case by case discretion and, if offered, individual quotation.

Schedule/Clause	Amended Sentence/Paragraph
<b>Dial-Up Internet Access Service</b>	
DIAS SD Paragraph 3.1	The Access Provider is not obliged to supply this Dial-up Internet Access Service unless and until: (a) <b><u>Supply Agreement exists between the Access Seeker and the Access Provider on terms acceptable to the Access Provider;</u></b> <del>(b)</del> at least one Point of Interface is identified and a Link is established; and <del>(be)</del> the parties have established a reliable means to ensure that the Dial-up Internet Access Service is only used for Internet Dial-Up Calls.
DIAS SD Paragraph 3.7 (new paragraph)	<b><u>Maintenance</u></b> <b><u>Access Provider shall provide maintenance and support services in respect of the Dial-Up Internet Access Service in accordance with good industry standards and to at least the service levels provided by Access Provider to its customers for services the same or equivalent to Internet Dial-Up Call services.</u></b>

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Schedule/Clause	Amended Sentence/Paragraph
<b>Inter-Operator Transit Access Service</b>	
ITAS SD Paragraph 3.10 (new paragraph)	<b><u>Maintenance</u></b> <b><u>Batelco shall provide maintenance and support services in respect of the Inter-Operator Transit Access Service in accordance with good industry standards and to at least the service levels provided by Batelco with respect to the transit of Telephone Calls where both the Destination OLO and Source OLO is Batelco.</u></b>

Schedule/Clause	Amended Sentence/Paragraph
<b>PSTN Transit Service</b>	
PSTNTS CD Paragraph 3.9 (new paragraph)	<b><u>Maintenance</u></b> <b><u>Batelco shall provide maintenance and support services in respect of the PSTN Transit Service in accordance with good industry standards and to at least the service levels provided by Batelco with respect to the transit of Telephone Calls which both originate and terminate on Batelco's Network.</u></b>

Schedule/Clause	Amended Sentence/Paragraph
<b>International Private Leased Circuit Service</b>	
IPLC SD Paragraph 3.1	<b><u>Prerequisite Deleted.</u></b> <b><del>The Access Provider is not required to provide this Service unless and until there are in place between the Access Provider and Access Seeker Supply Terms acceptable to the Access Provider.</del></b>

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Schedule/Clause	Amended Sentence/Paragraph
IPLC SD Paragraph 3.2	Within the first week of each calendar quarter, the Access Seeker must supply, in respect of each month of the six (6) month period following the date of the forecast, a forecast of the IPLCs the Access Seeker anticipates that it will require, broken down by route and by capacity, in the form <b><u>reasonably</u></b> required by Access Provider from time to time, or if Access Provider has not provided any form, then in a reasonable format devised by the Access Seeker.
IPLC SD Paragraph 3.3(a)	The Access Seeker must submit a correctly completed Order to Access Provider to request supply of the IPLC Service in accordance with the Supply Agreement. The Order shall be submitted in the form <b><u>reasonably</u></b> specified by Access Provider from time to time.
IPLC SD Paragraph 3.3I	The IPLC Service is available at the bandwidths and Charges set out below and subject to availability <b><u>determined in accordance with the Access Provider's Priority Policy.</u></b> The Access Provider will only withdraw a bandwidth from availability on six (6) months' notice. Withdrawal of a bandwidth will not affect the unexpired portion of any Fixed Service Period of an IPLC.
IPLC SD Paragraph 3.3(d)	The technical specifications applicable to the IPLC Service and the <b><u>reasonably</u></b> technical requirements which the Access Seeker must satisfy in order for Access Provider to accept an Order the IPLC Service will be as indicated by Access Provider to the Access Seeker from time to time.
IPLC SD Paragraph 3.5(d)	<b><i><u>This IPLC Service is for the Access Seeker's own use only in respect of services which it provides to its customers in accordance with its licence and clause 12 of the Supply Terms of Bateleco's Reference Offer which is incorporated into this Service Description if it does not already form part of an agreement between the Access Seeker and the Access Provider. For the avoidance of doubt, the Access Seeker must not re-supply, hire, transfer ownership, assign, trade or engage in resale of this IPLC Service to third parties.Deleted.</u></i></b>
IPLC SD Paragraph 3.8I	The Charge is for cable connectivity and subject to availability of cable capacity <b><u>determined in accordance with the Access Provider's Priority Policy.</u></b> Charges are for IPLC Services <b><u>that can only be</u></b> carried over Access Provider's normal transmission and international cable routes. IPLC Services provided over other transmission and international cable routes are subject to case by case discretion and, if offered, individual quotation.

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Schedule/Clause	Amended Sentence/Paragraph
IPLC SD Paragraph 3.9 (new paragraph)	<p><b><u>Maintenance</u></b></p> <p><b><u>Access Provider shall provide maintenance and support services in respect of the IPLC Service in accordance with good industry standards and to at least the service levels provided by Access Provider to its customers for services the same or equivalent to international private leased circuit services.</u></b></p>
IPLC SD Paragraph 3.10 (new paragraph)	<p><b><u>Priority Policy</u></b></p> <p><b><u>(a) The Access Provider shall develop, disclose to the Access Seeker and subsequently apply a policy (the “Priority Policy”) for IPLC Service applications within twenty-one (21) days of the date of the first service request for IPLC Service from the Access Seeker or any Licensed Operator.</u></b></p> <p><b><u>(b) The Priority Policy shall be consistent with the following principles:</u></b></p> <p><b><u>(i) the Priority Policy of the Access Provider must be non-discriminatory between Access Seekers;</u></b></p> <p><b><u>(ii) the Priority Policy must apply on a non-discriminating basis to the provisioning of accepted IPLC Service applications and the Access Provider’s own internal confirmed orders, requirements and plans for international private leased circuits, its Near End International Gateway or the relevant international circuit capacity; and</u></b></p> <p><b><u>(iii) subject to sub-paragraph (i) above, the Access Provider must seek to maximize the efficiency of its Priority Policy.</u></b></p>

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Schedule/Clause	Amended Sentence/Paragraph
<b>Local Leased Circuit For OLO</b>	
LLCO SD Paragraph 3.1	<del><b><i>Prerequisite</i></b></del> <del><b><i>The Access Provider is not required to provide the LLCO Service unless and until there are in place between the Access Provider and Access Seeker Supply Terms acceptable to the Access Provider.</i></b></del>
LLCO SD Paragraph 3.2	Within the first week of each calendar month, the Access Seeker must supply, in respect of each month of the twelve (12) month period following the date of the forecast, a forecast of the LLCO Service the Access Seeker anticipates that it will require, broken down by route and by capacity, in the form <b><i>reasonably</i></b> required by Access Provider from time to time, or if Access Provider has not provided any form, then in a reasonable format devised by the Access Seeker.
LLCO SD Paragraph 3.3(a)	The Access Seeker must submit a correctly completed Order to Access Provider to request supply of the LLCO Service in accordance with the Supply Agreement. The Order shall be submitted in the form <b><i>reasonably</i></b> specified by Access Provider from time to time.
LLCO SD Paragraph 3.3I	The LLCO Service is available at the bandwidths and Charges set out below and subject to availability <b><i>determined in accordance with the Access Provider's Priority Policy.</i></b> The Access Provider will only withdraw a bandwidth from availability on six (6) months' notice. Withdrawal of a bandwidth will not affect the unexpired portion of any Fixed Service Period of an LLCO.
LLCO SD Paragraph 3.3(d)	The technical specifications applicable to the LLCO Service and the <b><i>reasonably</i></b> technical requirements which the Access Seeker must satisfy in order for Access Provider to accept an Order the LLCO Service will be as indicated by Access Provider to the Access Seeker from time to time.
LLCO SD Paragraph 3.5(d)	<del><b><i>This LLCO Service is for the Access Seeker's own use only in respect of services which it provides to its customers in accordance with its licence and clause 12 of the Supply Terms of Bateleo's Reference Offer which is incorporated into this Service Description if it does not already form part of an agreement between the Access Seeker and the Access Provider. For the avoidance of doubt, the Access Seeker must not re-supply, hire, transfer ownership, assign, trade or engage in resale of this LLCO Service to third parties.</i></b></del> <del><b><i>Deleted.</i></b></del>

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Schedule/Clause	Amended Sentence/Paragraph
LLCO SD Paragraph 3.7 (new paragraph)	<p><b><u>Maintenance</u></b></p> <p><b><u>Access Provider shall provide maintenance and support services in respect of the LLCO Service in accordance with good industry standards and to at least the service levels provided by Access Provider to its customers for services the same or equivalent to local leased circuit services.</u></b></p>
LLCO SD Paragraph 3.8 (new paragraph)	<p><b><u>Priority Policy</u></b></p> <p><b><u>(a) The Access Provider shall develop, disclose to the Access Seeker and subsequently apply a policy (the “Priority Policy”) for LLCO Service applications within twenty-one (21) days of the date of the first service request for LLCO Service from the Access Seeker or any other Licensed Operator.</u></b></p> <p><b><u>(b) The Priority Policy shall be consistent with the following principles:</u></b></p> <p><b><u>(i) the Priority Policy of the Access Provider must be non-discriminatory between Access Seekers;</u></b></p> <p><b><u>(ii) the Priority Policy must apply on a non-discriminating basis to the provisioning of accepted LLCO Service applications and the Access Provider’s own internal confirmed orders, requirements and plans for local leased circuits or the relevant national circuit capacity; and</u></b></p> <p><b><u>(iii) subject to sub-paragraph (i) above, the Access Provider must seek to maximize the efficiency of its Priority Policy.</u></b></p>

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Schedule/Clause	Amended Sentence/Paragraph
<b>Wholesale DSL Service</b>	
WDSL SD Paragraph 4.1 sub-paragraphs	<p>(a) <del><i>the Access Seeker warrants to Batelco that the End User to whom Access Seeker provides services using the DSL Service over a Useable Pair is the same End User to whom Batelco supplies a standard telephone service using that Useable Pair;</i></del></p> <p><del>(b)</del> — Batelco will only provide the DSL Service to the Access Seeker for so long as the End User continues to acquire that standard telephone service from Batelco using that Useable Pair; <b><u>and</u></b></p> <p><del>(be)</del> where the End User ceases to have a standard telephone service from Batelco using that Useable Pair, Batelco will terminate the provision of the DSL Service over that Useable Pair at the same time; <b><u>and</u></b></p> <p><del>(d)</del> — <del><i>DSL Service will not be provided over a Useable Pair at an address where another telephony service has been terminated for failure to pay and the debt remains uncleared.</i></del></p>
WDSL SD Paragraph 4.1 (new rider)	<b><u>For the purposes of this paragraph, “standard telephone service” means the provision of a direct exchange line only, so that provision of the DSL Service shall not affect any End User’s carrier pre-select services.</u></b>
WDSL SD Paragraph 4.3	In respect of each the DSL Service, the Access Seeker releases Batelco from all liability to the End User or the Access Seeker, and indemnifies Batelco, <b><u>subject to Batelco using all reasonable endeavors to mitigate the effects of the occurrence of any indemnified event,</u></b> against all costs, expenses, liability, loss or damage incurred or suffered by Batelco in conjunction with any claims, actions or proceedings against Batelco (including third party claims or claims by an End User) arising out of the following (to the extent that the liability is caused by the testing, qualification, enquiry regarding, provision, transfer or cancellation of a DSL Service <b><u>other than as a result of the negligence, error or default of Batelco</u></b> ):
WDSL SD Paragraph 4.5	The Access Seeker acknowledges that there may be technical, structural, architectural, provisioning or other constraints affecting Batelco’s ability to provide the DSL Service. The Access Seeker agrees that it will, at its own expense, configure its network and locate its equipment as <b><u>reasonably</u></b> requested by Batelco to enable the successful implementation of the Wholesale DSL service.

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Schedule/Clause	Amended Sentence/Paragraph
WDSL SD Paragraph 4.6	The Access Seeker must ensure that its resale of the DSL Service and the End User's use of the DSL Service comply with the <b><u>reasonable</u></b> technical and usage requirements of <del>the equivalent</del> Batelco <del>service</del> <b><u>in order to maintain network integrity. Effect from time to time. The Access Seeker will provide Batelco with monthly statistics (anonymised) of subscriber types for the purpose of aggregation of information to the TRA and the Ministry of Transportation.</u></b>
WDSL SD Paragraph 4.8	<b><u>The Access Seeker will provide Batelco with monthly statistics (anonymised) of subscriber types for the purpose of aggregation of information where such information is requested in writing by the TRA or the Ministry of Transportation.</u></b>
WDSL SD Paragraph 5.1(b)	Batelco is under no obligation to provide the DSL Service, or to undertake any network modifications, rearrangements or harmonization, if the Batelco network does not pass Service Qualification, <b><u>provided that Batelco provides the Service Qualification report to the Access Seeker,</u></b>
WDSL SD Paragraph 5.2	<b><u>The Access Seeker shall have the right to appeal the findings of any Service Qualification report, which appeal shall be a Dispute for the purposes of Clause 24 of the Supply Terms.</u></b>
WDSL SD Paragraph 9.10	<b><u>Warranties-Undertakings</u></b> In respect of each DSL Transfer Request submitted by the Access Seeker to Batelco, Access Seeker <b><u>shall use all reasonable endeavors to ensure</u></b> that:
WDSL SD Paragraph 9.12	The Access Seeker indemnifies Batelco in respect of any loss, liability or cost incurred by Batelco (including third party claims or claims by any End User) in connection with a breach by the Access Seeker of the warranties <b><u>or undertakings</u></b> given under this Service Description, <b><u>subject to Batelco using all reasonable endeavors to mitigate the effects of any such breach.</u></b>
WDSL SD Paragraph 11	<b><u>Maintenance</u></b> <b><u>Access Provider shall provide maintenance and support services in respect of each End User's direct exchange line or shared metallic path over which the Access Seeker's DSL Service is provided to the End User in accordance with good industry standard to at least the service levels provided for all other direct exchange lines provided by the Access Provider.</u></b>

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Schedule/Clause	Amended Sentence/Paragraph
<b>Schedule 7 – Facility Access Service</b>	
Schedule 7 Paragraph 1(c)	The Access Provider has agreed to grant the Access Seeker non-exclusive access to the Facilities to install, operate and maintain Equipment for the <b><u>lawful provision of public telecommunications networks or services in the Kingdom of Bahrain (the “Permitted Use”)</u></b> .
Schedule 7 Paragraph 2.3 (sub-paragraphs (c) to (e))	<del>(e) — the inability or the likely inability, of the Access Seeker to comply with any reasonable conditions on which access to Facilities is provided, including but not limited to the inability or the likely inability of the Access Seeker to pay all Access Charges on a timely basis;</del>  <del>(c)(d)</del> any pre-existing collocation arrangements with other parties; and <del>(d)(e)</del> the collocation and other requirements of police, emergency and national security services.
Schedule 7 Paragraph 4(a)	The Access Provider must develop <b><u>and disclose to the Access Seeker</u></b> a queuing policy for Facility Access Applications for the supply of access to a Facility <b><u>within twenty-one (21) days of the date of the first request for a supply of access to a Facility from the Access Seeker or any other Licensed Operator.</u></b>
Schedule 7 Paragraph 6(a)(v)	the Access Provider is not legally required to provide <del>the access</del> <b><u>Access Services</u></b> ;
Schedule 7 Paragraph 7(a)	Where the Access Provider <b><u>reasonably</u></b> determines <del>in its sole discretion</del> that a Field Study is necessary to determine whether the relevant Facility is available for access, the Access Provider must notify the Access Seeker of such determination at the time it notifies the Access Seeker of its acceptance of the Facilities Access Application under paragraph 5(c) and that the granting of access in respect of the accepted Facilities Access Application is subject to the successful completion of that Field Study.
Schedule 7 Paragraph 7 (new sub-paragraph)	<del>(d)</del> <b><u>Where the Access Provider is required by law to provide Access Services, it shall estimate its Make Ready Work costs in accordance with a schedule of costs for time and materials set out at Annex 1 to Schedule 3.</u></b>

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Schedule/Clause	Amended Sentence/Paragraph
Schedule 7 Paragraph 7 (new sub-paragraph)	<b><u>(e) Upon reasonable notice to the Access Provider, the Access Seeker shall have the right either to supply to the Access Provider its own materials of the same, or materially the same, type and quality as the Access Provider’s materials detailed in the Field Study for use in any Make Ready Work or, where reasonably practicable, to carry out the whole or any part of the Make Ready Work itself as a sub-contractor to the Access Provider subject to fair and reasonable terms and condition for the provision of that sub-contracted Make Ready Work.</u></b>
Schedule 7 Paragraph 14(a)(i)	take all reasonable steps to ensure that all Make Ready Work is carried out so far as practicable, within the construction timetable <b><u>and costs estimates</u></b> forming part of the Field Study; and
Schedule 7 Paragraph 18	<b><del>(a) Subject to paragraph (b), without limiting either party’s obligations under this Schedule, the Access Seeker must have in force and maintain, for the term of this Schedule, with an insurance company licensed in Bahrain and approved by the Access Provider (such consent not to be unreasonably withheld), and on terms and for coverage reasonably acceptable to the Access Seeker:</del></b>  <b><del>(i) a broad form public liability policy of insurance to the value of at least USD5,000,000 in respect of each and every claim; and</del></b>  <b><del>(ii) property insurance for those assets used by it under this Schedule to the value of at least USD5,000,000 in respect of each claim.</del></b>
Schedule 7 Paragraph 18	<b><del>(b)(a)</del></b> The Access Provider may, in writing, require the Access Seeker to maintain higher insurance coverage than that required under <b><u>paragraph (a) Clause 17.18 of the Supply Terms</u></b> where the Access Provider reasonably believes that such higher insurance coverage is necessary given the level and nature of the Access Seeker’s access to the Access Provider’s Facilities. Where the Access Provider requires the Access Seeker to maintain higher insurance coverage under this paragraph, the Access Seeker must comply with any such requirements within 30 Working Days of being so notified by the Access Provider.  <b><del>(b)(e)</del></b> On request by the Access Provider, the Access Seeker must immediately produce evidence that it has complied with, and is continuing to comply with, its obligations under <b><u>paragraphs paragraph 18(a) and 18(b)</u></b> .

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Schedule/Clause	Amended Sentence/Paragraph
<b>Schedule 8 – Dictionary and Rules of Interpretation and Construction</b>	
Schedule 8 Part 1	Access Service means: <del>(a)</del> —a Service Batelco is required to supply under section 57(e) of the Telecommunications Law and which is described in Schedule 1; <del>or (b)</del> — <b><u>a Service Batelco is required to provide under a licence and which is described in Schedule 1.</u></b>
Schedule 8 Part 1	<b>Facility</b> means a: (a) Tower; (b) Radiocommunications Site; <del>or</del> (c) Duct; <b><u>(d) main distribution frame equipment room; (e) local exchange; (f) Duct chamber; (g) Underground plant; (h) cable station; (i) earth station; (j) power room; (k) street cabinet; and (l) riser room,</u></b> as the context requires, which has already been constructed and is owned by the Access Provider at the time a Facilities Access Application is made.
Schedule 8 Part 1	Interconnection and Access Services means the services described in Schedule <del>1 either as an Access Service or an Interconnection Service.</del> <b><u>1, being:</u></b> <b><u>(a) either as an Access Service or an Interconnection Service; or</u></b> <b><u>(b) a Service Batelco is required to provide under a License.</u></b>
Schedule 8 Part 1	New Service means a service relating to the interconnection of the parties' respective Networks <b><u>or a service relating to the access to one party's Network or services by the other</u></b> (including any commercial services required to facilitate that interconnection <b><u>or access</u></b> ) that is: <b><u>(a) currently provided under the Reference Offer but has not previously been supplied to the Access Seeker pursuant to the Supply Terms or any other agreement between the Access Provider and Access Seeker; or</u></b> <b><u>(b) not currently provided or able to be provided under the Reference Offer and has not previously been supplied pursuant to the Supply Terms or any other agreement between the Access Provider and Access Seeker.</u></b>
Schedule 8 Part 1	<b><u>Reference Access Offer means that part of the Reference Offer identified by Batelco from time to time as being the offer required by Section 57(e) of the Telecommunications Law.</u></b>

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Schedule/Clause	Amended Sentence/Paragraph
<b>Schedule 9 – Supply Terms</b>	
Schedule 9 Clause 11.1	Where a request from a Licensed Operator for a New Service is for a new Interconnection Service <b><u>or a new Access Service</u></b> then the New Service Request shall be processed in accordance with this clause 11.
Schedule 9 Clause 11.3(d)	the commercial terms applicable to the scoping, development, testing, implementation and supply of the New Service, including:  <b><u>(i)</u></b> <del>(e)</del> the charges and pricing regime to apply to any or all of those activities considering the likely time and resources required;  <b><u>(ii)</u></b> <del>(f)</del> the framework, dependencies for, and scope of, any proposed testing and acceptance processes;  <b><u>(iii)</u></b> <del>(g)</del> a draft timetable for the scoping, development, testing, implementation and supply of the New Service; and  <b><u>(iv)</u></b> <del>(h)</del> any other matters relevant to the New Service Request.
Schedule 9 Clause 11.9	<del>11.8</del> —Either party may deem that a Request for New Service has been withdrawn if, other than as a result of its own acts or omission in default of these Supply Terms:
Schedule 9 Clause 11.11	<del>(e)</del> —to adopt a commercial approach to negotiation.
Schedule 9 Clause 11.12	Neither party may launch a new Interconnection Service <b><u>or Access Service</u></b> without giving the other party as much written notice as practicable that such a new Interconnection Service <b><u>or Access Service</u></b> will be available and in any event by the earlier of the commencement date of the New Service Implementation Period or on the same notice as that launching party's retail business receives of the new Interconnection <b><u>Service or Access</u></b> Service.

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<b>Schedule/Clause</b>	<b>Amended Sentence/Paragraph</b>
Schedule 9 Clause 19.9	<b><i>If Subject to the terms of any Service Description and Schedule 4, if</i></b> the provision of a Service by the Access Provider in accordance with a Forecast of the Access Seeker would require a commitment of resources by the Access Provider for the purposes of meeting its normal provisioning cycles, the Access Provider may request that relevant features of the Forecast be confirmed. The request for confirmation will include an indication of the Charges, or the basis for calculating Charges, which would be payable to the Access Provider on the basis of the Forecast if confirmed. If the Access Seeker confirms a Forecast and any later Forecast for the same period is different, the Access Provider must, within three months of the later Forecast, make reasonable endeavors to mitigate any loss by seeking to re-use relevant equipment or facilities within six months of the relevant later Forecast. The Access Seeker must pay the Access Provider the amount of any loss to the extent that it has not been mitigated, within 30 days of receipt of an invoice.
Schedule 9 Clause 20.9(a)	as a statement of general principle, by reference to <del>to</del> either:

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**Part 2**

**Amended Annex 2 to the Wholesale DSL Service Description of the Reference Access Offer**

**ANNEX 2 DSL TRANSFER LIST: -**

<b>Access Speed for Residential Customers</b>	<b>Included Usage (Upload and download)</b>	<b>Increment for usage above threshold</b>
256kbps downstream/64kbps upstream	5 GB	1MB
512kbps downstream/128kbps upstream	8 GB	1MB
1Mbps downstream/256kbps upstream	15 GB	1MB
2Mbps downstream/512kbps upstream	20 GB	1MB

- Does not include an ADSL modem.
- Includes one email account with 10Mb storage limit.
- Recommended modems and suppliers are:
  - 1. INMA:** GreatSpeed USB
  - 2. A.Rashid Est:** Aztech USB
  - 3. Intercol :** SpeedTouch USB

<b>Access Speed for Business Customers</b>	<b>Included Usage (Upload and download)</b>	<b>Increment for usage above threshold</b>
256kbps downstream/64kbps upstream	2.5GB	1MB
256kbps downstream/64kbps upstream	5GB	1MB
512kbps downstream/128kbps upstream	10GB	1MB
1Mbps downstream/256kbps upstream	15GB	1MB
2Mbps downstream/512kbps upstream	20GB	1MB
256kbps downstream/64kbps upstream	NA	NA
512kbps downstream/128kbps upstream	NA	NA
1Mbps downstream/256kbps upstream	NA	NA
2Mbps downstream/512kbps upstream	NA	NA

- Includes 5 email accounts with 20MB storage for each account.
- Includes Single port Ethernet ADSL modem

**Part 3**

**New Service Description**

**SERVICE DESCRIPTION x-x: BITSTREAM SERVICE**

**1. THE SERVICE**

The **Bitstream Service** is an access service which enables the Access Seeker to provide high speed services to its End Users via a digital pathway across the Access Provider's network. The digital pathway consists of one or more ADSL Links between End User premises and one or more Aggregation Links.

**Available To:** Holders of an appropriate Individual Telecommunications or Class License.

**Traffic:** Traffic permitted by the licenses held by Access Seekers.

**Reciprocal Service:** Not required

**2. DEFINITIONS**

Capitalized terms not defined in this Service Description are defined in the Dictionary. Terms defined in this Service Description are specific to it.

**Access Seeker** means a Licensed Operator.

**ADSL** means asymmetrical DSL.

**ADSL Link** means the digital point-to-point communications between an End User Premises and the DSLAM nearest to that End User Premises.

**Aggregation Link** means the logical or physical link between an End User, via a Batelco Aggregation Point as described in Annex 4, and an Access Seeker's Point of Presence.

**Batelco Aggregation Point** means a location identified in Annex 4.

**Batelco Exchange (BE)** means an exchange which has DSLAMs installed at the time of the Bitstream Request. A forecast rollout of BEs is set out in Annex 5.

**Bitstream Change** means a change from one Bitstream Service to another Bitstream Service where a Bitstream Service is provided to an Access Seeker for the provision of services to an End User.

**Bitstream Change Request** means a request from an Access Seeker to make a Bitstream Change.

**Bitstream Request** means a Bitstream Service Request, a Bitstream Change Request or Reversal Request, as the case may be.

**Bitstream Service Request** means the request by the Access Seeker for a Bitstream Service.

**DSL** means digital subscriber line technology, having physical and electrical characteristics defined by relevant international telecommunications and engineering standards.

**DSLAM** means a DSL access multiplexer, the network device that receives signals from multiple customer ADSL connections and aggregates the signals on a high-speed backhaul line using multiplexing techniques.

**End User** means an existing customer paying a direct exchange line rental to Batelco in connection with a Useable Pair.

**End User Consent** means the written consent of an End User to receive a service by means of a Bitstream Service supplied to the Access Seeker in accordance with a Bitstream Request, which consent is provided to Batelco by or on behalf of the End User.

**End User Management** means all aspects of interface with the customer product support and billing of the End User by the Access Seeker in relation to each End User contracting with the Access Seeker for using the Bitstream Service and first line support by the Access Seeker in relation to maintenance issues related to the End User.

**End User Premises Equipment** means a splitter and DSL modem, or other equivalent technology, necessary to support the End User ability to use a Bitstream Service

**Gaining Operator** means an Access Seeker who presents Batelco a valid End User Consent and Bitstream Request.

**Implementation Date** means the date set out in a Bitstream Request, which shall be determined in accordance with the timescales set out in clause 11.11 of the Supply Terms.

**Incompatibility** (and the cognate term **Incompatible**) means a circumstance in which a Bitstream Service cannot reasonably be provided over the Batelco network, whether by reason of a technology block or a product or for any other technical or product-related reason. Incompatibilities may include but are not limited to: PABX, hunting lines, ISDN, key telephone systems, fixed wireless systems and distance limitations.

**Invalid Transfer** means a Bitstream Transfer:

- (a) where the End User (or its/her/his agent) did not request the services that the Access Seeker has made a Bitstream Service Request in order to supply to the End User;
- (b) where a valid written End User Consent cannot be produced by the Gaining Operator to support the Bitstream Request; or
- (c) which resulted from a processing error.

**IP** means Internet protocol.

**IP Addresses** means the Internet addressing information, in compliance with the relevant standard which describes the address of all devices physically located within the global Internet.

**Losing Operator** means an Access Seeker whose End User is subject to a Bitstream Request given to Batelco by a Gaining Operator.

**MPLS** means multi-protocol label switching.

**MSAN** means multi service access node.

**Network Boundary** means the Batelco distribution point at customer premises contemplated by Batelco's fixed services license.

**Non-Batelco Equipment** means any End User Premises Equipment which is not supplied and supported and maintained by Batelco and all equipment used by the Access Seeker.

**Point of Presence (POP)** means an aggregation or network connection point in the Access Seeker's Network located at premises owned or shown to be leased by the Access Seeker or at a Batelco collocation facility, but for the avoidance of doubt cannot be at an End User Premises, cable station, earth station, manhole, power room, lead-in pipe, duct, outdoor cabinet, MDF, riser room or anywhere not on the main island of Bahrain unless connected by a permanent physical connection above sea level and accessible by the Access Provider.

**Reversal Request** means a request to reverse a Bitstream Request as described in the Bitstream Request process set out in Annexure 1 to this Service Schedule.

**Service Qualification** means the analysis carried out by Batelco via the Internet or manually to confirm whether an ADSL service can be provided on the Batelco network by checking:

- (a) line loss;
- (b) infrastructure availability;
- (c) interference; and
- (d) incompatibility.

**Useable Pair** means the copper wire connection to the End User over which the End User is acquiring a standard suite of telephone services provided by Batelco.

### **3. SERVICE TERMS**

3.1 Provision of the Bitstream shall be conditional on the Access Seeker agreeing to submit the following minimum aggregate number of Bitstream Requests for all Batelco Exchanges month for each year of the provision of any Bitstream Service by Batelco to the Access Seeker:

- (a) 192 per month in the first year;
- (b) 128 per month in the second year; and
- (c) 96 per month in the third year.

3.2 Batelco will implement Bitstream Requests from the Access Seeker and requests for configuration and provision of connections from other Licensed Operators and from itself with respect to any Batelco Exchange in batches of 32, representing the number of ports on a DSLAM or MSAN equipment card in the Batelco Exchange.

3.3 If Batelco terminates this service in whole, then each Bitstream Service will terminate.

3.4 If a regulatory obligation to support or supply any specific Bitstream Service no longer applies, Batelco may cease to supply the Bitstream Service to an Access

Seeker on 3 months prior written notice. Following the giving of a notice under this clause, the Access Seeker will not request the Bitstream Service for any further End Users. The Access Seeker will also inform each existing End User that the Bitstream Service will terminate at the end of the 3 month period.

- 3.5 Where Batelco has reasonable objective grounds to consider that the Access Seeker is in breach of an obligation under paragraph 3.3 or 3.4, Batelco may:
- (a) suspend implementation by the Access Seeker of the Bitstream Service and/or
  - (b) take any other step contemplated by the Supply Terms to protect Batelco's network or other interests.

**4. END USER ACCESS**

**Useable Pairs**

- 4.1 The Access Seeker acknowledges that Batelco only supplies a Bitstream Service where Batelco supplies operational standard telephone services to the same End User over the same Useable Pair as may be used with the Bitstream Service by the Access Seeker to provide services to the End User and accordingly:
- (a) Batelco will only provide the Bitstream Service to the Access Seeker for so long as the End User continues to acquire that standard telephone service from Batelco using that Useable Pair; and
  - (b) where the End User ceases to have a standard telephone service from Batelco using that Useable Pair, Batelco will terminate the provision of the Bitstream Service over that Useable Pair at the same time.

**Installation or Transfer of End User Access**

- 4.2 For each Bitstream Request the Access Seeker warrants that it has informed the End User that:
- (a) the installation and operation of the Bitstream may require changes to the placement of existing telecommunications devices or changes of equipment; and
  - (b) the installation and operation of a Bitstream Service may mean that other Incompatible services cannot be supplied to the End User using the Useable Pair.
- 4.3 In respect of each Bitstream Service, the Access Seeker releases Batelco from all liability to the End User or the Access Seeker, and indemnifies Batelco, subject to Batelco using all reasonable endeavors to mitigate against the effect of the occurrence of the indemnified event, against all costs, expenses, liability, loss or damage incurred or suffered by Batelco in conjunction with any claims, actions or proceedings against Batelco (including third party claims or claims by an End User) arising out of the following (to the extent that the liability is caused by the testing, qualification, enquiry regarding, provision, transfer or cancellation of a Bitstream Service):
- (a) disruption in PSTN services;

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- (b) suspension or cancellation of the Bitstream Service;
  - (c) suspension of the provision with the Bitstream Service of particular IP Addresses;
  - (d) cancellation of, or inability to provide, other Incompatible services;
  - (e) termination in accordance with paragraph 3.2 of this Service Description; and
  - (f) in relation to any matter set out in paragraph 4.1 of this Service Description.
- 4.4 The Access Seeker acknowledges that the Bitstream Service will allow it to provide services to End Users but the quality of service will be subject to the variable conditions of the Usable Pair.
- 4.5 Data transport using the Bitstream Service between either DSLAM equipment or MSAN equipment, and a Batelco Aggregation Point are available for the range of products identified in Annex 2.

**Maintenance**

- 4.6 Batelco will provide network maintenance and support services to ensure that all of the network elements used to provide the Bitstream Service are provided to the Access Seeker at the same level of quality of service and availability as Batelco provides to itself for the same or equivalent network elements.

**5. EQUIPMENT**

- 5.1 The provision of a Bitstream Service or the implementation or transfer of the Bitstream Service does not include the provision of any cabling or any customer premises equipment.
- 5.2 The Access Seeker must ensure that Non-Batelco Equipment connected to the Bitstream Service:
- (a) meets the specifications and requirements defined by relevant international telecommunications and engineering standards; and
  - (b) is approved equipment.

**6. CONNECTION**

- 6.1 Batelco will use its reasonable endeavors to connect the Bitstream Service by the relevant Implementation Date. Batelco will notify the Access Seeker when the connection has been effected in accordance with the Bitstream Request procedures set out in Annexure 1 to this Service Description. Except for any service credit specified in this Service Description, Batelco will not be liable for any inconvenience, loss or damage suffered by Access Seeker or an End User if Batelco does not connect the Bitstream Service by the Implementation Date.
- 6.2 The Access Seeker releases Batelco from all liability to the End User or the Access Seeker, and indemnifies Batelco, subject to Batelco using all reasonable endeavors to mitigate against the effect of the occurrence of the indemnified event, against all costs, expenses, liability, loss or damage incurred or suffered

by Batelco in connection with any claims, actions or proceedings against Batelco (including third party claims) arising out of the allocation of IP Addresses or allocation and management of domain names.

**7. FORECASTING**

- 7.1 At the beginning of each calendar month, the Access Seeker must supply a forecast of the expected requests for the Bitstream Service in each month of the six month period following the date of the forecast, in the form required by Batelco from time to time.
- 7.2 Subject to Batelco complying with paragraph 7.3 below, for each forecast made under this Service Description, the aggregate number of requests for Bitstream Services identified in a calendar month of the forecast plus the two following calendar months are a commitment to order those Bitstream Services. If the Access Seeker has not placed those number of requests by the end of the calendar month the Access Seeker shall pay an amount equal to three times the relevant monthly port charge for each request for Bitstream Services not ordered.
- 7.3 Batelco will use all reasonable endeavors to adhere to the rollout plan for BEs at Annex 5 and will give the Access Seeker reasonable notice of any changes to that annex, such notice period to be at least the same as any notice period by which any Batelco retail operation is notified of changes by any Batelco wholesale operation.

**8. PRIORITY POLICY**

- 8.1 Batelco will develop, disclose to the Access Seeker and subsequently apply a policy (the "Priority Policy") for Bitstream Requests within twenty-one (21) days of the effective date of the first Bitstream Request made by the Access Seeker or any other Licensed Operator or Batelco.
- 8.2 The Priority Policy must be consistent with the following principles:
- (a) Batelco's Priority Policy must be non-discriminatory between Access Seekers;
  - (b) the Priority Policy must apply on a non-discriminating basis to the provisioning of accepted Bitstream Requests and Batelco's own internal confirmed orders, requirements and plans for the relevant ADSL Links for each affected End User and the relevant Aggregate Links capacity; and
  - (c) subject to sub-paragraph (a) above, Batelco must seek to maximize the efficiency of its Priority Policy.

**9. BITSTREAM TRANSFER**

**Bitstream Transfer Process**

- 9.1 Batelco and the Access Seeker must comply with this clause 8 and Annex 1 of this Service Description when carrying out any Bitstream Request.

9.2 The Access Seeker must establish robust procedures to ensure an appropriate End User Consent is received and properly recorded before any Bitstream Service Request is notified to Batelco.

9.3 The Access Seeker must provide Batelco with a copy of the End User Consent.

**Charges**

9.4 The Access Seeker must pay to Batelco the relevant Charges set out in Annex 3.

**Responsibilities**

9.5 From the time of the completion of the Bitstream Transfer Process, the relevant End User will no longer be a customer of Batelco for those services supplied by the Access Seeker using the Bitstream Service, but instead the customer of the Access Seeker for those services.

9.6 From the time of completion of the Bitstream Transfer Process, the Access Seeker must provide End User Management to support the Bitstream Services. However, if requested by an End User or the Access Seeker, Batelco will provide technical support in relation to problems End Users may report with services supplied to End-Users using the Bitstream Service, including fault management, and support and maintenance for which the Access Seeker must pay the charges set out in Annex 3.

9.7 The Access Seeker will contact Batelco for all maintenance replacement or repair of the Bitstream Service and the network on the Access Provider's side of the Network Boundary and will pay Batelco the Charges at the rate specified (or if not specified, on a time and materials basis) for all such work.

9.8 The Access Seeker is responsible for billing the customer for the services supplied to End Users using the Bitstream Services provided since the date of the completion of the Bitstream Request.

9.9 In relation to any Batelco service:

- (a) Batelco will continue to bill the End User for any outstanding Batelco charges and other Batelco services; and
- (b) the End User remains liable to pay any outstanding charges to Batelco and remains subject to standard Batelco debt enforcement policies,

notwithstanding that the End User is an Access Seeker customer also.

9.10 In respect of each Bitstream Request submitted by the Access Seeker to Batelco, Access Seeker must ensure that:

- (a) the Access Seeker has a valid End User Consent authorizing the transfer or implementation (which consent is not more than 30 days old from the date the Bitstream Request was submitted to Batelco);
- (b) the Access Seeker retains records of the End User Consent and the retention is in accordance with the reasonable requirements notified to the Access Seeker by Batelco from time to time;

- (c) the Access Seeker has used its reasonable endeavors to ensure that the information in the Bitstream Request is complete and correct;
  - (d) the processing of each Bitstream Request, at the time it is lodged, does not breach any party's contractual or other rights (but, for the avoidance of doubt, a valid End User Consent shall be deemed to be a valid notice to Batelco to terminate the relevant Batelco services);
  - (e) the Access Seeker has used its reasonable endeavors to provide the End User with sufficient information to make an informed choice about transferring the End User's service provider, including informing the End User that:
  - (f) the End User remains liable for the amount of any pre-existing charges and possible termination expenses; and
  - (g) the Access Seeker has complied with any relevant legislation or other industry code of practice.
- 9.11 Batelco may investigate whether the Access Seeker has acted in compliance with the warranties given under this Service Description. On reasonable request, the Access Seeker must provide Batelco with evidence that the Access Seeker has acted in compliance with this Service Description.

**Indemnity**

- 9.12 The Access Seeker indemnifies Batelco, subject to Batelco using all reasonable endeavors to mitigate against the effect of the occurrence of the indemnified event, in respect of any loss, liability or cost incurred by Batelco (including third party claims or claims by any End User) in connection with a breach by the Access Seeker of the warranties given under this Service Description.

**10. BILLING PERIOD**

- 10.1 The Billing Period in respect of the Service shall be 30 days. The Billing Period shall commence on the date of the first billing date of the Batelco billing cycle after installation and may include billing on a pro rata time basis for the period between the Bitstream Request to the next billing cycle to ensure compatibility with the Batelco billing cycle.

**SERVICE DESCRIPTION x-x: BITSTREAM SERVICE**

**ANNEX 1 –BITSTREAM REQUEST PROCESS**

**1. Bitstream Service Request for existing or new Bitstream Services**

- 1.1 The Access Seeker must make a Bitstream Service Request for the provision of a Bitstream Service to allow the Access Seeker to supply a new or existing serve to an End User.
- 1.2 A Bitstream Service Request must be in the format notified by Batelco from time to time and be submitted by the means and to the address notified by Batelco from time to time.
- 1.3 Batelco will, within 5 Working Days of receipt of any Bitstream Service Request, notify the Access Seeker whether the Bitstream Service Request is:
  - (a) accepted; or
  - (b) rejected.
- 1.4 Batelco may reject a Bitstream Service Request if it:
  - (a) is incomplete or incorrect or illegible or cannot reasonably be understood;
  - (b) does not properly identify the End User, or provide information which does not enable Batelco to identify the Useable Pair;
  - (c) is not submitted in accordance with paragraph 3 of this Annex 1;
  - (d) requests the Transfer of a Bitstream Service which has different transmission characteristics from any existing Bitstream Service being provided (if any), without also requesting a Service Qualification with regard to the Useable Pair over which the new Bitstream Service is to be provided; or
  - (e) requests the Bitstream Service for provision of services to a customer or potential customer of the Access Seeker who is not an End User at the date of submission of the Bitstream Service Request; or
  - (f) has any other defect notified by Batelco to the Access Seeker at the time of rejection.
- 1.5 Batelco may in its sole discretion elect to accept any Bitstream Service Request notwithstanding that there is any defect in that Bitstream Service Request if Batelco considers that such defect does not have a material effect on Batelco's ability to process the Bitstream Service Request and provide the Bitstream Service.

**2. Bitstream Change Request**

- 2.1 The Access Seeker must, to initiate a Bitstream Change to an existing Bitstream Service used by the Access Seeker to supply a service to an End User, provide Batelco with a properly completed Bitstream Change Request, in the format notified by Batelco from time to time, submitted by the means and to the address notified by Batelco from time to time.

- 2.2 Batelco will, within 5 Working Days of receipt of any Bitstream Change Request, notify the Access Seeker whether the Bitstream Change Request is:
- (a) accepted; or
  - (b) rejected.
- 2.3 Batelco may reject a Bitstream Change Request if it:
- (a) is incomplete or incorrect or illegible or cannot reasonably be understood;
  - (b) does not properly identify the End User, or provide information which does not enable Batelco to identify the Useable Pair;
  - (c) is not submitted in accordance with paragraph 3 of this Annex 1;
  - (d) requests a Bitstream Change which cannot reasonably be provided for practical or operational reasons; or
  - (e) has any other defect notified by Batelco to Access Seeker at the time of rejection.
- 2.4 Batelco may in its sole discretion elect to accept any Bitstream Change Request notwithstanding that there is any defect in that Bitstream Change Request, if Batelco considers that such defect does not have a material effect on Batelco's ability to process the Bitstream Change and provide the Bitstream Service.

**3. Batches**

- 3.1 The Access Seeker must submit Bitstream Requests to Batelco in batches. Batches must be:
- (a) submitted to the address notified by Batelco from time to time;
  - (b) submitted by authorized personnel of the Access Seeker;
  - (c) made up of only Bitstream Requests that comply with the requirements of this Service Description and the Supply Agreement;
  - (d) made up of no more than the forecast average number of orders per day (being the number of forecast Bitstream Requests for the relevant calendar month divided by the number of working days in that month); and
  - (e) identified by a unique batch number generated by the Access Seeker.
- 3.2 Batelco will only accept batches of Bitstream Requests that:
- (a) are delivered to Batelco during business hours;
  - (b) comply with the requirements set out in paragraphs 1 and 2;
  - (c) do not exceed the maximum number of two (2) batches per day.
- 3.3 If any batch of Bitstream Requests contains one or more Requests that contains one or more defects, Batelco will:

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- (a) reject the defective Bitstream Requests by returning them to Access Seeker; and
- (b) continue to process the valid Bitstream Requests within the same batch.

**4. Completion of Request**

- 4.1 If Batelco notifies the Access Seeker that the Bitstream Request is accepted, than Batelco must use its reasonable efforts to complete the Bitstream Request on or before the Implementation Date.
- 4.2 Batelco will not be obliged to further process a Bitstream Request where:
  - (a) the relevant Bitstream Service cannot meet Service Qualification;
  - (b) there exists any Incompatibility;
  - (c) the number of Bitstream Requests exceeds the Forecast for the relevant month by more than 25% and Batelco is not able to process the number of Bitstream Requests made due to resourcing constraints without having to deploy more staff or other resources; or
  - (d) an authorized person from the End User or the Access Seeker is not available to provide further information when requested.

**5. Notification of Completion of Request**

- 5.1 Batelco must, within 2 Working Days of completion of a Bitstream Service Request or a Bitstream Change Request, notify the Access Seeker of completion.
- 5.2 Batelco is entitled to rely on a Request as evidence that the relevant End User:
  - (a) in the case of a Bitstream Service Request:
    - (i) has given a valid End User Consent in relation to the requested Bitstream Request; and
    - (ii) understands and is aware of the End User's continuing liability to pay any charges to Batelco when due; and
  - (b) in the case of a Bitstream Change Request understands and has requested the Bitstream Change.

**6. Reversal of a Bitstream Request**

- 6.1 At any time following the successful completion of a Bitstream Request, either:
  - (a) the relevant End User; or
  - (b) the Access Seeker;may make a request to Batelco to reverse the Bitstream Request.
- 6.2 Batelco will, within 2 Working Days of completion of a Reversal Request notify the Access Seeker that the Reversal Request has been processed.
- 6.3 The Access Seeker must render a final bill to the End User within 10 Working Days of receipt of a notice from Batelco under paragraph 6.2 of this Annex.

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**SERVICE DESCRIPTION x-x: BITSTREAM SERVICE****ANNEX 2 BITSTREAM PRODUCT LIST**

Bitstream products are defined for both residential End Users and business End Users, and are defined with packet access contention ratios as shown in the table below.

<b>Bitstream Access Speed</b>	<b>Residential - Packet Access Contention Ratio</b>	<b>Business - Packet Access Contention Ratio</b>
256kbps	15:1	8:1
512kbps	10:1	8:1
1Mbps	10:1	8:1
2Mbps	10:1	8:1

**Data Type Handling**

The data type handling capability provided over the Bitstream Service is a Layer 2 MPLS service. End User services provided by the Access Seeker will be limited only by the capability of the Access Seekers themselves within the boundaries of the Access Providers network.

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**SERVICE DESCRIPTION x-x: BITSTREAM SERVICE**

**ANNEX 3 BITSTREAM CHARGES**

**Bitstream Service**

<b>Item</b>	<b>Chargeable Activity</b>	<b>Effective date</b>	<b>Charge (BD)</b>	<b>Charge Basis</b>
BS.1	Fee to establish Bitstream Service relationship	12 July 2006	50,497 or 14,189	Once off or Per year for 5 years
BS.2	Agreement Processing fee	12 July 2006	1,406	Once off
BS.3	Maintaining relationship charge	12 July 2006	878	per month
BS.4	Port Connection	12 July 2006	20	Per event
BS.5	Charges for rejects, reversals, and withdrawals associated with Bitstream Order	12 July 2006	5	Per event
BS.6	Charges for Change of Speed	12 July 2006	5	Per event
BS.7	External removal charge	12 July 2006	5	Per event
BS.8	Port Rental	12 July 2006	Residential: 256kbps: 10.49 512kbps: 14.73 1Mbps: 23.18 2Mbps: 40.10	BD Per port/per month
BS.8	Port Rental	12 July 2006	Business: 256kbps: 12.13 512kbps: 17.43 1Mbps: 27.99 2Mbps: 49.13	BD Per port/per month
BS.9	Port Cessation Charge	12 July 2006	5	Per event

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<b>Item</b>	<b>Chargeable Activity</b>	<b>Effective date</b>	<b>Charge (BD)</b>	<b>Charge Basis</b>
BS.10	Charges for a call out for a technician at Access Seeker's request	12 July 2006	Time and Materials in accordance with Annex 3 of Schedule 3.	Per event
BS.11	Charges for suspension of Bitstream service at Access Seeker's request	12 July 2006	5	Per act of suspension and per act of connection.

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**SERVICE DESCRIPTION x-x: BITSTREAM SERVICE**

**ANNEX 4 AGGREGATION LINK**

The Access Provider must establish at least one Aggregation Link.

The Batelco Aggregation Points and their expected implementation dates are as follows:

- (a) Seef: For Seef site is October 2006
- (b) Manama: For Manama site is December 2006

**Set-up**

The price of establishing each Aggregation Link is subject to time and materials.

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**SERVICE DESCRIPTION x-x: BITSTREAM SERVICE**

**ANNEX 5 Batelco Exchange Roll out Plan [Available to operators holding a valid and relevant license upon request]**

<b>DSLAM CUTOVER</b>			
<b>No</b>	<b>Site Name</b>	<b>Planed Cutover Date</b>	<b>Location</b>
1	[*]	[*]	[*]
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
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23			
24			
25			
26			

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<b>DSLAM CUTOVER</b>			
<b>No</b>	<b>Site Name</b>	<b>Planed Cutover Date</b>	<b>Location</b>
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			

**ORDER No. 2 of 2006****Reference Access Offer Order****Annex 2 to the Reference Access Offer Order****Amended Tariffs (Schedule 3)****Customer Access Tail (CAT) Service**

Monthly recurring tariffs per circuit

<b>Speed (kbps)</b>	<b>Monthly Charge (BD)</b>
64	52
256	81
2048	359

**Dial-Up Internet Access Service**

<b>Item</b>	<b>Chargeable Activity</b>	<b>Effective date</b>	<b>Charge</b>	<b>Charge Basis</b>
2-X.1	Carriage of Internet Dial-up Call from a Batelco mobile telephone	12 July 2006	8.64 Fils Per minute	Per second
2-X.2A	Carriage of Internet Dial-up Call from a Batelco fixed PSTN Telephone (single tandem)	12 July 2006	3.01 Fils per minute	Per second
2-X.2B	Carriage of Internet Dial-up Call from a Batelco fixed PSTN Telephone (double tandem)	12 July 2006	4.03 Fils per minute	Per second
2-X.3	Carriage of Internet Dial-up Call from a directly connected customer of another operator	12 July 2006	Current rate for relevant operator's origination of call plus 2.68 Fils per minute	Per second
2-X.4	Charges for Link installation	12 July 2006	175	Per event
2-X.5	Link Rental	12 July 2006	75	Per month/per Link

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Item	Chargeable Activity	Effective date	Charge	Charge Basis
2-X.6	Fault handling where no fault lies in the Batelco network	12 July 2006	BD 3.983	Per event

**Inter-Operator Transit Access Service**

Item	Chargeable Activity	Effective date	Charge	Charge Basis
2-9.1	Per Transit Call as set out in Service Description, payable by the Access Seeker	12 July 2006	2.68 Fils plus tariffs as set out below	Per min, chargeable per second
2-9.2	Per Transit Call as set out in Service Description, payable by the Access Seeker	12 July 2006	The applicable rate for termination of calls (or origination of calls in the case of freephone/reverse tariff scenarios) on the Other Licensed Operators Network	Same charging basis as applied by the terminating operator (or originating operator in the case of freephone/ reverse tariff scenarios) which is usually per min, chargeable per second

**PSTN Transit Service**

Item	Chargeable Activity	Effective date	Charge	Charge Basis
2-1.1	Per Transit Call (as set out in the service description)	12 July 2006	4.03 Fils	Per minute, chargeable per second

**Local Lease Circuit for OLO (LLCO)**

Monthly recurring tariffs per LLCO (including loan of CPE)

Speed (kbps)	Monthly Tariff (BD) Open Period	Monthly Tariff (BD) Fixed Period > 2 years
64	BD 23 per month	BD 22 per month
256	BD 52 per month	BD 50 per month
512	BD 89 per month	BD 85 per month

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<b>Speed (kbps)</b>	<b>Monthly Tariff</b>	<b>Monthly Tariff (BD)</b>
	<b>(BD) Open Period</b>	<b>Fixed Period &gt; 2 years</b>
2048	BD 315 per month	BD 300 per month

**Wholesale DSL Service**

<b>Item</b>	<b>Chargeable Activity</b>	<b>Effective date</b>	<b>Charge (BD)</b>	<b>Charge Basis</b>
DSL.1	Fee to establish Wholesale DSL Service relationship	12 July 2006	5,000	Once off
DSL.2	Agreement Processing Fee	12 July 2006	1750	Once off
DSL.3	Fee for processing DSL Transfer Request and completion	12 July 2006	8	Per event (additional tariff if installation required)
DSL.4	Charges for rejects, reversals, and withdrawals associated with DSL Transfer, Invalid Transfer	12 July 2006	5	Per event
DSL.5	Fee for a change of speed associated with DSL Transfer if applicable	12 July 2006	5	Per event
DSL.6	External Removal or Change Number	12 July 2006	Equivalent to retail tariff	Per event
DSL.7	Monthly End User port tariffs	12 July 2006	<b>Residential:</b> 256kbps: 14.70 512kbps: 19.18 1Mbps: 32.02 2Mbps: 41.90	BD Per port/per month

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<b>Item</b>	<b>Chargeable Activity</b>	<b>Effective date</b>	<b>Charge (BD)</b>	<b>Charge Basis</b>
DSL.7	Monthly End User port tariffs	12 July 2006	<b>Business: (Threshold)</b> 256kbps: (2.5) 14.38 256kbps: (5) 17.34 512kbps: 30.48 1Mbps: 46.17 2Mbps: 69.88	BD Per port/per month
DSL.7	Monthly End User port tariffs	12 July 2006	<b>Business: (Flat rate)</b> 256kbps: 38.45 512kbps: 56.52 1Mbps: 77.74 2Mbps: 118.27	BD Per port/per month
DSL.8	Usage tariffs	12 July 2006	2.26 Fils	Per Increment above threshold
DSL.9	Fee for a call out for a technician at Access Seeker request	12 July 2006	Time and materials in accordance with Schedule 3 Annex 1	Per event
DSL.10	Fee for suspension of ADSL Service at Access Seeker request	12 July 2006	5	Per act of suspension and per act of reactivation

**Bitstream Service**

<b>Item</b>	<b>Chargeable Activity</b>	<b>Effective date</b>	<b>Charge (BD)</b>	<b>Charge Basis</b>
BS.1	Fee to establish Bitstream Service relationship	12 July 2006	50,497 or 14,189	Once off or Per year for 5 years
BS.2	Agreement Processing fee	12 July 2006	1,406	Once off
BS.3	Maintaining relationship charge	12 July 2006	878	per month
BS.4	Port Connection	12 July 2006	20	Per event

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<b>Item</b>	<b>Chargeable Activity</b>	<b>Effective date</b>	<b>Charge (BD)</b>	<b>Charge Basis</b>
BS.5	Charges for rejects, reversals, and withdrawals associated with Bitstream Order	12 July 2006	5	Per event
BS.6	Charges for Change of Speed	12 July 2006	5	Per event
BS.7	External removal charge	12 July 2006	5	Per event
BS.8	Port Rental	12 July 2006	Residential: 256kbps: 10.49 512kbps: 14.73 1Mbps: 23.18 2Mbps: 40.10	BD Per port/per month
BS.8	Port Rental	12 July 2006	Business: 256kbps: 12.13 512kbps: 17.43 1Mbps: 27.99 2Mbps: 49.13	BD Per port/per month
BS.9	Port Cessation Charge	12 July 2006	5	Per event
BS.10	Charges for a call out for a technician at Access Seeker's request	12 July 2006	Time and Materials in accordance with Annex 3 of Schedule 3.	Per event
BS.11	Charges for suspension of Bitstream service at Access Seeker's request	12 July 2006	5	Per act of suspension and per act of connection.