

CONFIDENTIAL MATERIAL: [X]

RESPONSE

TO

**THE TELECOMMUNICATIONS REGULATORY AUTHORITY OF BAHRAIN (TRA)
DRAFT POSITION PAPER ON DEVELOPMENT, IMPLEMENTATION AND USE OF
BOTTOM-UP FIXED AND MOBILE NETWORK COST MODELS IN THE KINGDOM
OF BAHRAIN**

(REF MCD/05/11/064)

BY

BAHRAIN TELECOMMUNICATIONS COMPANY (BATELCO) BSC

ON

19 JULY 2011

(Our Ref GCL/255/11)

Bottom Up Costing Draft Position Paper Response

1. Batelco refers to the TRA's draft position paper dated 19 May 2011 as regards the development, implementation and use of bottom-up fixed and mobile network cost models in the Kingdom of Bahrain.
2. Batelco refers to its request dated 29 May 2011 (ref GCL/200/11) regarding an extension in relation to replying to this consultation and thanks the TRA for allowing an extra period in which to reply, especially bearing in mind the significance of the proposals and the number of other regulatory project implementation and assessments taking place concurrently.
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Executive summary

4. Batelco supports the TRA's efforts to consult fully with interested parties at the outset of a proposed project. The draft position paper in relation to the development and nature of bottom up cost models is a comprehensive and useful document to assist informed debate about a complex technical regulatory area which has the potential for far reaching consequences for regulatory pricing, investment and investigative decisions in the coming years.
5. One difficulty we have encountered is being able to at the outset to submit definitive answers relating to the design of the proposed models and related financial questions. This is because the effects of those choices cannot be seen at the outset. Whilst the model design questions in the consultation are precise, the uses to which the cost information will be put have only been described in general. Batelco has however tried to address these questions as far as practicable at this point in the consultation.
6. Batelco has concerns why at this point in the liberalisation process, there is a compelling and overriding need to develop these bottom up cost models with a planning period over the next 4-5 years. This is because we consider:
 - consumers and operators are already benefiting from keen prices
 - costs of doing communications business in Bahrain is increasing, and bottom up models are the least likely tools to take account of these types of costs
 - Batelco as the Kingdom's national operator has public and social service commitments in reality which are unlikely to be captured by these cost models since they may not represent the costs of an efficient operator now
 - There are already a number of sources of cost information available which is being used and is subject to reform and improvements. Many of the adjustments being consulted up in the context of bottom up can be applied to top down cost information
 - Improvements have been are being made to the top down cost information being produced by Batelco;
 - There are many other priority regulatory projects to address in the remainder of 2011 whereas this project appears to be given the highest priority; and
 - The overall choice of models and operator to model runs the risk of regulatory "lag" and is not forward looking. We suggest a number of other

candidates for bottom up cost modelling given their current and prospective market power.

This is explained in more detail in our response to question 24.

7. If the TRA is insistent on developing and implementing bottom up models, despite the substantive concerns that we express in this submission paper, then subject to reserving our right to provide further comments, we request that the TRA consider:
 - the TELRIC approach being used for the fixed access network model;
 - applying the tried and tested “required capacity” method in relation to the treatment of joint and common network costs;
 - apply Ramsey pricing with benchmarks to fill the gaps in data whilst we see the pragmatic reasons for using EPMU to allocate unattributable costs; and
 - apply a scorched node approach rather than scorched earth – see also our comments below in the following paragraphs.
8. We note the TRA’s specific design approach for the mobile network cost models, provided this does not mean a departure from the policy of setting symmetrical termination rates. Using VIVA’s network as a proxy for a hypothetical new entrant appears at the outset a sensible approach, but we do not know the details of VIV’s network topology. If there are manifest distortions created as a result, then we would expect the TRA to address this.
9. The TRA’s choice to model 2G and 3G technologies appears reasonable at the initial phase of this project, as well as the assumptions the TRA is making towards an average spectrum assignment for the generic model. We question the assumption details behind licence costs, in particular whether the TRA is including or excluding the BD 80 million paid by VIVA up front for the third mobile licence.
10. In relation to the fixed core assumptions, we support TRA using our NGN core as a starting point together with a scorched node approach and two varieties being modelled, one with a media gateway (s) and one without. We highlight the importance of capturing all the network elements in the core, as the summary diagram simplifies the situation in reality. [X]

[X]

11. In relation to the fixed access model, we ask the TRA to consider a GPON architecture with FTTB instead of P2P and FTTH since this reflects the current reality.
12. In terms of the models' dimensioning, we see the advantages in both the yearly and historical approach and question the TRA's assumption that the markets will grow as expected in the model planning periods (therefore narrowing the margin for error between the yearly and historical approach).
13. For the list of services, we have a few suggestions for removing certain services. Given the various uses to which the bottom up cost data can be put, we disagree with the assumption that just because a theoretical service is being modelled, it means that it will become a wholesale remedy in practice. We would also welcome clarification that "over the top" or value added services are not going to be modelled with a view to subjecting these innovative services to retail and/or wholesale price regulation.
14. For the proposed treatment of operational expenditure and given our recent responses to proposals in the last reference offer and LLU pricing assessments, it is difficult for Batelco to concur with the TRA's choice of 3 out of the 4 options, since those three are likely to result in Batelco not being able to recover its actual costs.
15. For pragmatic reasons, the annualisation approach we support is tilted annuities rather than the more complex full economic depreciation approach. In relation to the "adjusted tilted annuity" approach we wish to check our understanding with the TRA's summary in the draft position paper.
16. We have qualified support for the economic asset lives approach in the context of preparing the bottom up costing models. As with the other model design choices, we consider it important to check the results of taking this approach compared with use of accounting asset lives. This is all the more so because the choice of asset lives is a sensitive variable.
17. We do not agree with the TRA's approach to remove certain non-network working capital cost items as we expect it to be a material item and in reality communications companies in Batelco's position cannot exist without spending and recovering such cost items.
18. Batelco has no specific comments at this stage on the use of gradients, nor on the structure of the cost models, the involvement of specific operators and project steps as summarised. We reserve our rights to make further comments once detailed work commences.

19. We have no objection to a 4-5 year planning period for the cost models. We seek the TRA's confirmation that the models are going to be updated each year.
20. The proposed timeline for completion of all steps in just over 5 months is too ambitious in Batelco's experience. We ask the TRA to build in enough time for adequate operator review, taking holiday periods and other project and assessment deliverables into account.
21. We disagree with the proposal that there should be setting of access and interconnection prices over three years. The implication is that top down costing information (which is produced on an annual basis) is not going to be taken into account. Taking into account the replicability requirements in the TRA's retail tariff regulation, setting three year wholesale tariffs would unduly restrict the ability of the retail business to submit tariff notifications which attempt to meet the competition and/or deliver keener prices to customers.
22. Glidepaths in specific cases are supported to avoid price "shocks" in the market. We disagree with the assumption that the end point of a glidepath has to be bottom up LRIC. The Telecommunications Law and the Access Regulation allow a spectrum of regulatory pricing decisions to be made under the umbrella of "fair and reasonable". The TRA's draft policy implies a move towards one extreme end of that spectrum of determining a "fair and reasonable" prices.

Consultation questions – specific Batelco responses

- 1. Do respondents agree with the Authority's preliminary view to implement both pure LRIC and LRIC+ approaches for services handled by the fixed core and the mobile networks?**
23. Batelco notes that the TRA wishes (paragraph 78) to develop pure LRIC and LRIC+ calculations for the fixed core and mobile network cost models. Pure LRIC is to be used for "selected increments" (or selected services).
24. There are some advantages in developing pure LRIC data, which the TRA covers in its draft position paper

25. On the other hand, there are a number of important opposing factors to take into account as regards solely developing pure LRIC cost information, which can be summarised as follows:

- A pure LRIC implementation approach does **not** provide full cost recovery to operators and thus disincentivises future investments in mobile networks and the fixed core. We do however note the TRA's preliminary position that:

“ it is not appropriate to calculate pure LRIC for services which account for a considerable proportion of traffic (e.g leased lines, broadband access) as pure LRIC will lead to cost recovery difficulties.”

- Recovery of under-recovered costs in regulated wholesale services from retail services leads to distortions of market signals, and might lead to worse outcomes in terms of efficiency for the Bahraini telecoms market as a whole. Bearing in mind competitive conditions at the moment in the mobile market and prospective competition in markets for services which use the fixed core, Batelco doubts whether in practice there will be the freedom to do so in the absence of specific regulatory intervention. Market players will just be left with under-recovered costs or products which are allocated extra costs, but not taken up by consumers because cheaper alternatives are available.
- The lower termination rates resulting from pure LRIC are likely to lead to higher fixed charges in the retail market and/or the ending of offers on other components of mobile services such as waived registration fees and/or handset subsidies, which disproportionately affect the less well off.
- Low termination rates incentivises off-net traffic to be offloaded from an operator's network at the earliest point, since this increases competitors' network costs while reducing your own (known as “hot potato routing”). This behaviour may lead to under-investment by the network operators.
- Low termination rates combined with high origination charges at retail level may lead to arbitrage opportunities for third parties. A third party operator can exploit the difference in cost of origination and termination by using call-back to set up calls that only pays termination rates to regulated operators, thus reducing the cost recovery of regulated operators below sustainable levels.

26. Noting these advantages and disadvantages, Batelco believes that it is appropriate to develop both sets of information for economic comparison purposes and to model the likely effects.

27. However, it is one thing to develop the data, and another in terms of the practical policy use it is put to. The TRA should take into account the market effects at the time before automatically determining pure LRIC prices.

28. In respect of the fixed access model, the TRA wishes to follow a Total Element LRIC approach (“**TELRIC**”) such as that currently used by Batelco in its top down LRIC

model. Our preliminary view also is that if the choice is only between pure LRIC and a TELRIC approach, then the latter is more preferable because of cost recovery concerns and the adverse effect on future network investment in the fixed access network.

2. Do respondents agree with the Authority's preliminary view to implement both the required capacity and the Shapley-Shubik allocation methods for joint and common network costs in the bottom-up models?

29. We note the TRA is intending to use two allocation methods for joint and common network costs for the bottom up models. We note that these two allocation methods are at opposite ends of the scale in terms of expected results, so this approach provides a degree of flexibility in making adjustments. We would expect the required capacity approach to allocate the majority of common and joint costs to high bandwidth data services which are usually subject to lighter regulation (therefore minimising voice termination costs). Shapley-Shubik we understand gives relatively equal shares of the common and joint costs to component services.

30. In practical terms the required capacity approach is more “tried and tested” and is common practice in constructing bottom up models. It also relies upon usage as the key cost driver. Adding the Shapley-Shubik method increases complexity and expected time to prepare such models.

3. Do respondents agree with the Authority's preliminary view to allocate un-attributable costs (non-network common costs) on the basis of the EPMU approach?

31. We consider there are theoretical merits in adopting Ramsey pricing in respect of allocation of unattributable or non-network common costs because it is the economically optimal approach. It is also possible to minimise problems obtaining input data by perhaps using benchmarks instead. For these reasons the TRA should consider it is worth the extra effort.

4. Do respondents agree with the choice of the scorched node approach for bottom-up cost models?

32. Given the choice, Batelco supports the “ scorched node” approach which uses the actual locations of mobile bases stations or fixed service nodes rather than the greenfield “scorched earth” approach because :

(a) It captures real constraints seen by telecom operators deploying a network in that they cannot select any location for their nodes, and they cannot move the nodes

once deployed without incurring significant and often preventatively high costs;
and

(b) scorched node models are easier to implement than scorched earth.

33. We note from the draft position paper that the TRA is concerned that obvious inefficiencies may be observed if a scorched node approach is adopted and that it reserves the possibility of making “adjustments”.

34. We would anticipate that the risk of this happening is relatively low in practice because of such factors as:

(a) for all models, the geographic size of the Kingdom encouraging economies of density and minimising inefficient deployment of infrastructure since the coverage area for most of the population is relatively small compared to other jurisdictions; and

(b) for the mobile models, recent mast sharing initiatives such as the Mast Sharing Regulation 2009 and the draft Mast Sharing Deployment Regulation anticipating a practical initiative to survey all three mobile networks with a view to optimising base station usage and sharing.

5. Do respondents agree with proposed approach for mobile network cost modelling, and in particular the generic operator?

35. In relation to the proposed approach, Batelco has the following comments:

(a) Developing one generic and 3 individual operator mobile network models.

Batelco supports this approach because it combines the merits of having a neutral benchmark generic operator’s results to compare against each individual operator’s model results. We would ask the TRA though in a costing assessment to determine mobile termination rates which model (generic or actual) takes precedence. Given Batelco supports the TRA’s current policy in favour of a symmetrical approach to termination rates, it would be unfortunate for this proposed costing design to result in fragmentation of termination rates and the distortions which are then created.

We also note that opting just for a generic model alone would not be useful for competition investigations to establish whether an actual dominant operator is pricing services below LRIC cost, anti-competitive margin squeeze, excessive pricing or anti-competitive bundling.

(b) Generic operator: hypothetical new entrant or average operator.

We note that both varieties can be used in developing bottom up costing models for mobile networks.

The TRA seems to imply at paragraph 120 (d) that it prefers the hypothetical new entrant, but with VIVA's base station topology as a starting point.

In context of Bahrain, given the recent roll out, launch and market share of VIVA between the award of the third mobile licence in 2009 and the present day, we consider this as a common sense pragmatic approach. Batelco however is not in a position to know the actual topography of VIVA's network. If there are unexpected manifest distortions created (for example, for operational and licence requirement reasons VIVA sacrificed efficiency for speed to market in the design of its actual network), then we would expect the TRA to reconsider its position.

(c) Market share of the generic operator

Batelco supports the generic model reflecting reality. Given the rapid increase in market share of VIVA since its launch in March 2010, and the assumed market shares now of each of the 3 mobile operators, and a share reflecting at least the size of a minimum efficient scale of traffic, we would support a 33% market share as being more appropriate for the Kingdom of Bahrain at the present time.

36. Given our representations in other parts of this response where we request consideration we given to other alternative networks, in particular:
- (a) the new proposed national broadband network announced on 4 July 2010 and reported recent activity in roll out of that network;
 - (b) the development of other alternative fixed networks; and
 - (c) Menatelecom's wimax network
37. We would ask the TRA to consider whether more varieties of the fixed access and fixed core networks (not just Batelco's actual network) need to be devised to take these developments into account.

6. Do respondents agree with the Authority preliminary position regarding the type of technologies (2G + 3G) to be modelled?

38. Although a true forward looking model would not take 2G into account, Batelco recognises that it may be included in practice because:
- (a) currently we have no plans to withdraw GSM technology;
 - (b) the fifteen year spectrum licences granted to the 3 mobile operators (with spectrum using 2G) still have a number of years left to run parallel with the expected life of a bottom up mobile model. In Batelco's case this there are 6 years left, not taking any extension requests into account;

- (c) the TRA's approach is to assign frequencies at 900MHz and 1800Mhz which are capable of using either 2G or 3G;
- (d) GSM technology is part of the actual cost base, even looking forward, and that not omit this would lead to under recovery of costs for each of the three mobile operators subject to a BU cost model determination. We have previously confirmed to you in respect of Batelco's network that we should assume a 50:50 split of traffic and cost between 2G and 3G and voice and data are used on both.

7. Do respondents agree with the Authority preliminary position regarding the spectrum to be considered when modelling the costs of mobile networks?

- 39. Batelco's preliminary view is that the TRA is adopting a reasonable approach as regards taking the average spectrum assignments into account when developing the model of a generic operator. A fall back position would be to align the spectrum assigned to Viva with the TRA's position on scorched nodes at paragraph 10 which seems to imply equivalence to Viva's recently rolled out network. However, again if the approach raised manifest anomalies, then the TRA should be prepared to make adjustments.
- 40. As regards taking spectrum amounts into account, we would also ask the TRA to consider:
 - (a) Treating the spectrum as a variable cost rather than a fixed cost (therefore being taken into account in a pure LRIC bottom up model). This is supported by evidence that spectrum can be migrated or refarmed (as recently happened in August 2009 by Batelco surrendering frequencies to the regulator). It is also conceivable that during the life of the model, spectrum may be able to be traded, depending how TRA spectrum policy is developed;
 - (b) Clarifying in its scorched node approach that the size of the radio network can also be variable during the life of the model (being the actual number of sites over time) and not frozen at an "existing" point in time at the start of the model.

8. Do respondents agree with the Authority preliminary position regarding the treatment of license costs and frequency usage fees?

- 41. We understand the position of the TRA is to take account of the "licence fee" of the latest entrant in Bahrain:

"....because it is supposed to better reflect the real value of such a licence in a competitive environment with 3 operators. "

42. Batelco is not clear whether the reference here to “licence fee” refers to one or all of VIVA’s:

- Amount paid up front for the third mobile operator licence (some BD80 million); and/or
- Annual amount of service licence fees (treated as a common cost for the whole business); and/or
- Annual amount of frequency licence fees (treated as a network cost recovered in the same way as other radio network assets).

43. The draft statement also assumes that an MVNO does not pay for any licence fees (paragraph 128). This may depend on the type of MVNO and previous TRA statements have suggested that a licence may be necessary.

44. If the up front amount is taken into account, then this would be a significant influence on the generic bottom up model for the mobile network. If it is to be excluded, we would ask the TRA perhaps not to take into account VIVA’s licence costs for service and frequencies (if this is the intention), but the costs of the services of an operator with 33% of the market and with an average spectrum assignment (consistent with the TRA’s proposed approach on spectrum).

9. Do respondents agree with the Authority preliminary view regarding the type of technologies to be considered when modelling the costs of the fixed core network?

45. The TRA has explained that it wishes to model the fixed core network based on Batelco’s NGN core based on a scorched node approach

46. We are broadly in support of such a general approach considering Batelco has recently deployed and activated an NGN core network. We would note that the general figure 2 diagram on page 35 does not quite capture the full extent of Batelco’s fixed core network. [X]

[X]

47. We also note the TRA wishes to model two varieties of the fixed core network, one with a media gateway and one without. We consider a model with a media gateway more appropriate at the present time given the current state of interconnection arrangements and the use by some OLOs of TDM based equipment currently. It would lead to an under-recovery of costs if interconnection gateway equipment was removed from the model. If and when that situation changes, with for example, complete substitution of PSTN based interconnection arrangements with IP handover only and no media/interconnection gateways, then the model can be adapted to reflect this.

10. What is the respondents' view on the type of fibre architecture and technology that should be modelled for the NGA? Please elaborate and formulate substantiated alternative proposal if necessary.

48. At this initial stage, Batelco would support a modelling approach which actually reflects reality, given Batelco is deploying GPON based architecture when fibre is rolled out.
49. We therefore reject the TRA's preliminary view that P2P FTTH architecture should be assumed to take place in all cases. The TRA mentions the possibility of unbundling fibre and refers to a draft position paper on new developments, but this is at odds with the TRA's policy of requiring LLU over copper only, following the TRA's LLU order dated 14 September 2009 and reaffirmed on 5 May 2011 in its LLU order relating to service terms and conditions and LLU pricing.
50. GPON is a common technical standard used internationally and is the technology of choice of Batelco. In respect of FTTH, this may be the case with single dwelling units where fibre is delivered, but it is not usually the case in the multiple dwelling units depicted in figure 3 of the draft position paper. Usually fibre will be deployed as far as the basement only (FTTB).

11. Do respondents agree with the Authority's preliminary view on proposed "yearly approach" to network dimensioning optimisation?

51. Batelco remains neutral on this particular issue at this point. Whilst it recognises the appeal of simplicity using the yearly approach to network dimensioning optimisation, we have concerns over two areas:
- (a) we understand the historical approach is more accurate because since it involves dimensioning the network for each year of its existence (or at least many years in the near past), the network in each year can be dimensioned based on forecasted demand as well as the inherited network infrastructure. Unavoidable inefficiencies are taken into account given it is difficult to predict the future with perfect accuracy.
 - (b) the draft position paper assumes that the Bahrain market is still growing, and therefore the differences between the yearly approach and historical approach are narrowed. Batelco would question whether this is unequivocally the case in all market sectors, given evidence of flattening growth for certain mobile services, leased circuit numbers falling and falling growth for fixed line services.

Question 12: Do respondents agree with the list of services to be considered in the bottom-up cost models? If there is any service requiring significant capacity that is not listed above, please specify it

52. We do not consider there is a major product or service missing from the proposed composite retail and wholesale summary, but have the following comments on possible exclusions on grounds that the services are not significant in terms of volumes:

- Wholesale DSL – query whether to including this as a separate item as it is a resale retail product. We also note the TRA’s proposal to withdraw this from the reference offer during the period of the model if LLU is fit for purpose;
- Local leased circuits and LAN Connect – on a forward looking basis, the IP-VPN product is the principal line of business compared to the other two;
- PSTN TS and PSTN GMSC - label descriptions to be updated to take account of network changes in 2010;
- PSTN transit – Batelco reiterates it wishes to withdraw this service as there has been no take up since its offering in 2006;
- PSTN call to voicemail and mobile call to voicemail - we question the materiality of these scenarios.

53. We note the TRA’s inclusion of a wholesale FTTH broadband access service and dark fibre as “wholesale services to be modelled” (and in the case of FTTH a retail service). Whilst these services form part of a bottom up cost model exercise proposed by the TRA, for the avoidance of doubt we do not support the inclusion of these additional remedies in future reference offers. We note the various general purposes summarised at paragraph 246 of the draft position paper, and assume the inclusion of these “services” is merely for the purpose of assessing costs associated with new investments (para 246 (f) rather than para 246 (a) - assessment of regulated wholesale services)).

54. We would also ask the TRA to reconsider the inclusion of international inbound to mobile services in the mobile networks model, pending finalisation of TRA policy in relation to this service.

Question 13: Do respondents agree with the Authority's preliminary view on the treatment of OPEX in the bottom-up cost models?

55. Batelco's default position is to support continued use of the top down approach, with continued improvements. Use of actual costs in this context (option (a)) is therefore valid and ensures that it is able to recover its expenditure.
56. In the context of a bottom up approach, the TRA will be aware we have not supported efficiency adjustments, especially in the context of calculation of the copper cost for LLU. The three options preferred by the TRA (adjustments, use of information from suppliers and/or time estimates, conducting a benchmark) all have their advantages and disadvantages depending not just on the method, but how that method is interpreted and applied (for example, the choice of benchmark, or reliance placed upon estimates provided by Batelco and/or suppliers). It is therefore difficult at this stage to endorse or agree with the TRA's view without knowing the impact of those choices in a particular case.

14. Do respondents agree with the Authority's preliminary view to implement tilted annuities or adjusted tilted annuities in the bottom-up cost models?

57. Given the complexity presented by the multi-year economic depreciation approach (which can lead to cost modelling over a period of 40 years or more) Batelco is of the preliminary view that tilted annuities are the most sensible way ahead in Bahrain.
58. The draft position paper also states it will use "adjusted tilted annuity" where there are significant changes in output volumes over time such as for FTTH. We consider the nature of the adjustment is not well defined in the main part of the draft position paper but appendix B refers to other regulators that have implemented adjusted tilted annuities. These regulators modified the rate of price change (or tilt) to also factor in the trend in changes in output volumes. In the typical case of output volumes growing over time, this was implemented as an increased tilt, leading to heavy back loading of recovery and low costs in the current period. This approximates the effect of a full economic depreciation calculation, but only for a limited time period. The tilted annuity formula assumes constant tilt over time, and this is a particularly strong assumption for output volumes. Thus, in a model that covers several years, we would recommend the TRA ensures the tilt adjustment is changed in later periods to allow realistic cost recovery levels for Batelco.

15. Do respondents agree with the Authority's view that economic asset lives should be used in bottom-up models?

59. The TRA is aware of the arguments Batelco has presented last year against the lengthening of asset lives in relation to the 2009 regulatory accounts and in respect of cost elements forming part of the copper cost for LLU. Batelco does not intend to repeat these arguments here, but refers to that correspondence.
60. Given the treatment of asset lives is a highly sensitive element in cost models, Batelco cautiously supports use of economic asset lives as they send more appropriate economic signals and are akin to the adjusted asset lives already instructed or ordered by the TRA in respect of fixed access network elements. At this stage of the project though and without knowing the full impact of such a choice on mobile network elements or the fixed core, we reserve our position on this point.

16. Do respondents agree with the Authority's preliminary view to exclude the working capital which is not related to the network activities or the provision of services?

61. Batelco does not support this approach to exclude all working capital not related to network activities because:
- (a) as a fully integrated and prominent company in Bahrain (unlike, say a virtual "no frills" communication company) we cannot exist without overhead functions and that the cost of these functions can only be recovered by the services we charge for; and
 - (b) some non-network working capital relates to items such as utilities and insurance, buildings and vehicles, IT developments, and other stock materials are very much related to the network operations and are necessary parts of cost for providing our communications services. To exclude them is to make arbitrary dividing lines over what is required to deliver a service in practice and what is functionally related to network operations.

17. Do respondents agree with the Authority's preliminary view that, except for working capital generated by CAPEX which is taken into account through depreciation formulas, the cost of working capital related to network OPEX should be excluded from the cost model unless operators can provide evidence of a significant and efficient level of such working capital?

62. Batelco considers that network opex-related working capital need to be considered in the models as this would include items such as stock materials and insurance which are directly related to network. It would also include other payables, credit balances and bank items which are normally required by the network cost centres to run their day to day operations. Given the level of working capital for the network is not immaterial and it is essential for running the network operations, we do not the TRA should exclude the cost of working capital related to network operating expenditure..

Question 18: Do respondents agree with the Authority's preliminary view that it may be appropriate in some cases to use gradients for the setting of regulated prices based on bottom-up models?

63. Batelco has no specific or additional comments at this stage on the use of gradients by the TRA.

Question 19: Do you agree with the Authority's preliminary view to model annual costs over a 4 to 5 year period notably to give visibility to operators and to enable the setting of regulated charges for multi-year periods?

64. Batelco in principle has no objection to a multi-year model being developed. There is a difference though between developing a multi-year model and then moving from the current annual reference offer assessment process towards a multi-year reference offer assessment process. We do not support moving straight to a three year cycle of access and interconnection pricing (please see our response to question 25 below).

Question 20: Do respondents have any comments and suggestions regarding the overall potential structure of bottom-up models that the Authority intends to develop?

65. Batelco has no specific comments at this initial point. The model structure laid out by TRA looks similar to common practice. We do however expressly reserve our legal rights to challenge details in the implementation, application and interpretation of the bottom up cost model when this information is available, even if the overall structure described at the outset is not contentious.

Question 21: Do respondents agree with the anticipated timeline for the development and implementation of the bottom-up cost models?

66. Given there are only five months left in the year, covering summer holiday periods, and there are multiple projects and implementation initiatives taking place involving the same network, wholesale, regulatory and regulatory finance teams, we feel the target completion of all three models in 2011 is ambitious. We also note that the proposed new timetable is also more compressed than the indicative process and timetable presented at the bottom up kick off meeting on 20 January 2011.

67. It is important that the process allows enough time for operator review as well as time for the TRA to implement changes agreed after operator review. As there may be one or two iterations of corrections of the model after review, the time table

should be flexible enough to allow this. We would kindly ask the TRA to set aside sufficient time for the full process of consultation on all three cost models.

Question 22: Do respondents agree with the key steps described in sections 6.1, 6.2, and 6.3 anticipated by the Authority for the development, implementation and validation of bottom-up cost models?

68. Batelco has no specific comments on these sections. The steps set out by the TRA appear in line with common practice for development of a set of bottom-up costing models, provided sufficient time is set aside for.

Question 23: Do respondents agree with the proposed strategy to involve relevant operators (Batelco, Zain and Viva) in the development and validation of the models?

69. Yes, but if the TRA agrees to other networks being part of the model process (such as Menatelecom's), they of course should also be part of the process.

Question 24: Do respondents have any comments regarding the above discussion?

70. This section of the draft position paper summarises the proposed uses to which the bottom up cost information may be put to. In particular the TRA notes that in practice four costing approaches tend to be used by regulators, and that a bottom up LRIC approach is one of those four.

71. Batelco notes the following possible circumstances for use of bottom up cost information by the TRA are (at paragraph 246):

- assistance in setting **regulated** wholesale tariffs
- assistance in the review of the retail tariffs
- assistance in anti-competitive investigations
- assessment of the costs associated with new investments such as FTTH deployments
- performance of sensitivity analysis

72. None of these uses are deemed to be controversial in principle. There is little detailed guidance though in the draft position paper as to:

- the precise circumstances the bottom up information will be used (beyond commentary that enduring bottlenecks assumed to be the fixed access network will tend to have top down or actual cost recovery principles applied, whereas other areas such as the fixed core and mobile networks will tend to be subject to a bottom up costing approach¹)
- whether bottom up is going to be used as a priority over other costing information, or in all cases equally in relation to other costing information
- whether Batelco can use that same bottom up information in its submissions, for example in response to competition investigations or in relation to notified controlled tariff submissions
- how this approach maps onto services which use both the core and the access network (for example, fixed broadband and datacoms services provided by Batelco)

73. The consultation assumes that introduction of three main bottom up cost models is appropriate and inevitable in the Kingdom of Bahrain. Whilst Batelco has responded to the specific questions asked by the TRA, we ask the TRA to take into account the following reasons not to pursue this project:

(a) Consumer and competitor benefit - customers both at the wholesale and retail level are already receiving the benefit of lower prices and increased competition for broadband, leased circuits, and mobile services. The TRA's own benchmarking information published with the market indicators report in December 2010 show that with perhaps the exception of leased lines prices, the prices on offer in the Kingdom compare favourably with OECD and Arab benchmarks. [X]

[X]

[X]

[X]

If bottom up data are going to be used to drive down wholesale prices particularly for mobile networks and the fixed core, then Batelco would question why prices need [X] to decrease further. Unlike the EU region where mobile termination rates were relatively high until recent regulatory intervention arising from the EU recommendation on fixed and mobile termination rates 2009², the benchmark rates in Bahrain already compare favourably with the EU:

Commission's target range for mobile termination rates by end 2012: 1.5-3.0 Eurocents or approximately **7.9-15.9 fils/minute**

¹ For example: "it appears that where infrastructure-based competition is possible or existing, the BU-LRIC approach is preferred while where it is not the case, top down models are preferred" (para 258)

² The 2009 recommendation on fixed and mobile termination rates requires symmetric termination rates to be introduced by NRAs by the end of 2012 based on the costs incurred by an efficient operator. The costs are to be calculated using a bottom-up "pure" LRIC model based on current costs.

Batelco's current mobile termination rate as at 1 Feb 2011: **6.203/6.553
fils/minute**

In Bahrain, there does not therefore appear to be an overriding need to create bottom up cost information to drive prices down further.

(b) Increasing costs of conducting business overall – all licensed operators are experiencing increased costs of carrying out business in the Kingdom which have to be recovered from customers somewhere. A bottom up approach will not be expected to take all these costs into account because the nature of the exercise is generally to remove joint and common costs in the hope they can be placed on other products. [X]

[X]

[X]

[X]

[X]

[X]

[X]

[X]

[X]

[X]

[X]. Whilst the central database for number portability has been funded by the TRA, there are still considerable implementation costs to be incurred this year for mobile and fixed number portability implementation.

(c) Public service, universal service and general legislative requirements for Batelco – the three bottom up models are proposed to focus upon Batelco (with mobile models also applying to Zain and VIVA). Bottom up models are aimed to reflect the costs of an efficient operator. The cost model does not take account of structural characteristics of the Bahraini economy, such as the requirements of the Labour Law 1976. Batelco fulfills an important role in the Kingdom as a major employer, social enabler and as a provider of public services such as:

- Payphones
- Universal service provision for basic voice telephony under article 64 Telecommunications Law
- Radio navigation services (fulfilling international treaty obligations)
- Supplier of last resort and capacity provider for international call routes
- Fixed line rental copper access cost not fully balanced

If the bottom up cost information is used to set regulated prices, then Batelco (and other major operators) are faced with the real prospect of not being able to

cover its costs of providing these public services, nor may it be able to continue meet its more general social and legal obligations as a leading company in the Kingdom.

(d) Other sources of costing data already available to make decisions

Although recognised by the TRA already in the draft position paper, we would highlight that bottom up cost information should not be the only source to make regulatory decisions to set prices. There are already alternative sources of costing data which could already be used to set “fair and reasonable” prices, including:

- FAC - top down
- LRIC – top down (pure LRIC, LRIC +, D-LRIC +)
- Annual reports and statutory accounts
- Internal profitability reports
- Management accounts
- Benchmarks

Out of the four varieties of cost model set out by the TRA in the draft position paper, three are or could be made available already by Batelco.

A lot of the adjustments and choices which have been offered in his consultation, can and have been ordered by the TRA and implemented by Batelco in a top down context already (see for example, the removal of costs, application of the 2009 WACC to 2008 costs and the lengthening of asset lives in the context of setting the LLU rental).

We also note that the TRA last year commenced a universal service and broadband project which would already have involved estimating the cost of next generation broadband roll out in the Kingdom. Whilst this data is not in the public domain, Batelco would assume that there is already an economic FTTH cost model in existence which can be used and adapted.

(e) Improvements already made and proposed to be made

Batelco would highlight the extensive improvements which have been introduced to its APM and regulatory accounts in terms of information provided to the TRA between 2004 and the present day. The draft determination on raising the audit standard published on 8 March 2011 also intends to introduce a higher audit standard to improve the robustness and confidence in the regulatory accounts

produced by Batelco. Considerable resources will have to be spent if this is implemented and we would ask whether concentrating efforts on a bottom up costing model project in the current circumstances is proportionate given anticipated activities in relation to raising the audit standard.

(f) Other projects requiring priority and successful implementation

We make further comments on the 5 months timetable in relation to question 21 above. Batelco would note that out of all the licensed operators, it will bear a disproportionate burden of costs and time spent on this detailed project. We would urge the TRA to reconsider whether, in the light of other delayed projects in the TRA draft plan and other priority projects elsewhere, it is the number one priority regulatory project for the remaining five months of this year.

We also note that depending on the design choices made and other operational constraints such as the availability of resources and data, development of bottom up models can be complex and time intensive. We also anticipate that they will require regular updating once created.

Alternative projects we have in mind as requiring priority consideration include but are not limited to:

- Key notified controlled tariff initiatives relating to both new innovative products and reductions in prices for existing SMP products
- Lawful access regulation implementation
- Bulk SMS regulation full implementation
- Website filtering upgrade testing and implementation
- GCC roaming price control implementation
- Ongoing wireless site sharing and mast deployment initiatives
- Reference offer 2011 assessment
- APM 2010 costs assessment
- Inbound international rates policy reassessment
- NGA policy with the National Broadband Networks in mind
- Market reviews to revise the findings made on 3 June 2008 in relation to Batelco retail SMP markets and overdue wholesale market dominance assessments overdue for revision
- Dispute resolution reforms
- Unified licensing
- Existing regulatory accounts, accounting separation and APM reform initiatives

(g) Regulatory lag

The application of the three bottom up models appear to have been designed with the 2008 Strategic Review and subsequent market determinations in mind. This is because only Batelco has been assumed to be the candidate for all three models, even though they are meant to be forward looking in nature. The current proposals could be made more forward looking by including other likely or prospectively dominant players (taking alternative networks into account, such as VIVA's planned fixed network, the new National Broadband Network, Menatelecom's national wimax network and Nuetel's fixed network exclusively in the Amwaj area).

Question 25: Do respondents agree that consideration should be given to setting access and interconnection prices over a medium-term time horizon such as 3 years?

74. We consider the current annual synchronised process to be a reasonable compromise given the legal requirement to produce two reference interconnection offers and two reference access offers each year where Batelco is currently deemed to have submitted these documents for assessment and approval. Annual reference offer assessments allow the opportunity for more flexibility in pricing to be offered by operators determined as having SMP. Any corrections can be introduced early to the market, as well as wholesale prices which allow Batelco's retail business to meet the TRA's strict replicability requirements in the Retail Tariff Regulation 2010. In the absence of timely market reviews and any reforms in the current system of retail tariff controls, locking in and "freezing" a three year wholesale tariff is expected to give even less freedom for Batelco's retail business to meet the competition and compete fairly.

Question 26: Do respondents agree that in some cases, when there is a significant gap between service costs calculated today and before (due for example to the move from a top-down cost model to a bottom-up cost model), the use of a glide path might be appropriate to move from existing prices to the appropriate cost-based level?

75. Whilst we support the continuance of one year synchronised reference offer submissions in general, Batelco also sees the value in the use of glidepaths in specific cases as has occurred in the past with:

- international inbound termination rates;
- [redacted]; and

- wholesale iplcs.

76. We kindly refer the TRA to previous submissions where we have highlighted that access prices set at “fair and reasonable” rates under the article 57 (e) of the Telecommunications Law and the access Regulation 2005 does not necessarily mean cost plus WACC only. There is a spectrum of pricing options available to the TRA ranging from retail at one end of the scale to pure bottom up LRIC at the other. This consultation represents a move to one extreme end of this “legal” scale.

77. The TRA’s question also implies an end point which comprises a move from top down cost plus WACC towards bottom up cost plus WACC. We would highlight that this is not the only option open to the TRA to ensure the correct balance between promotion of competition and safeguarding investment incentives.