مكتب التنظيم و الرقابة
Regulation & Supervision Bureau

Consultation Document

2013 Price Controls Review

PC5 Second Consultation Paper

10 October 2012 CR/E02/041

www.rsb.gov.ae

water, wastewater and electricity sector of the Emirate of Abu Dhabi

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Foreword

1. In April 2012, the Bureau published the PC5 first consultation paper on the review of the price controls for the main electricity, water and wastewater network companies operating in the Emirate of Abu Dhabi (AADC, ADDC, ADSSC and TRANSCO). The first consultation paper set out the Bureau's initial views on the main issues that should be considered in setting the PC5 controls.

2. The Bureau received detailed responses from the four licensees to the first consultation paper. This second consultation paper summarises these responses and sets out the way forward on important issues. The Bureau is due to publish draft proposals for PC5 in March 2013 and final proposals in September 2013, with the intention that new price should take effect from 1 January 2014.

3. Written or email responses to the issues raised in this paper should be sent by **10 December 2012** to:

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4. The Bureau proposes to make responses to the consultation exercise publicly available.

NICK CARTER
Director General

Executive Summary

Introduction

1. This second consultation paper on the PC5 review for AADC, ADDC, TRANSCO and ADSSC summarises the responses to the first consultation paper and sets out a proposed way forward on the main issues for the price control review.

Approach to regulation (Section 2)

2. Section 2 discusses overall approach to the price control review and reaches the following initial conclusions on the way forward.

   (a) The six areas of priority identified in the first consultation paper (improving capital efficiency, asset management, availability/security/quality of supply, encouraging the provision of high quality information, providing adequate funding for regulated activities and issues such as Emiratisation/end-use efficiency programmes) remain valid objectives for the price control review.

   (b) CPI-X controls should be retained but with consideration given to a more flexible arrangements to reflect the circumstances of the Emirate of Abu Dhabi. In particular, there should be more flexibility in relation to specified elements of operating costs and more timely reviews by the Bureau of capital efficiency, including the forward looking assessment of elements of important capital projects on an annual basis.

   (c) In relation to ADSSC's suggestions on aligning Government and regulatory funding, the Bureau will consult further with the Department of Finance and ADSSC and if practicable bring forward proposals in relation to these matters in the draft proposals due to be published in March 2013.

Form of controls (Section 3)

3. Section 3 sets out initial conclusions on the form and structure of the new CPI-X price controls, including the following.

   (a) PC5 controls should be set for ADSSC for 3 years (2014-2016) and for AADC, ADDC and TRANSCO for 5 years (2014-2018).

   (b) We are willing to work with the licensees to ensure the proper separation of distribution and supply businesses provided that ADDC provides a realistic and persuasive plan and timetable for the achievement of these objectives; otherwise the existing separation of distribution and supply controls should be retained. Separation of distribution and supply price controls would probably require significant changes to the structure and calculations of price controls.

   (c) The Bureau is also considering whether the scope of TRANSCO's price controls (currently covering licensed and unlicensed shared activities) should be expanded to include unlicensed dedicated activities outside the Emirate of Abu Dhabi.

(d) The 80:20 weights for the fixed and variable terms of the MAR remain appropriate. Nonetheless, the number of customers should be included as an additional revenue driver for ADSSC and TRANSCO's revenue drivers should be changed to reasonably estimated metered units and metered peak demands, irrespective of strict compliance with MDEC. Further, if we proceed with the separation of supply and distribution, it would be appropriate to remove the units term from the revenue driver for the supply business price control, to give the business clear incentives with respect to energy and water efficiency.

(e) The existing cost pass-through arrangements should be retained, perhaps with this treatment extended to the Bureau's licence fees, but with any further increases in the scope of cost pass through arrangements would require compelling evidence from licensees in support of such changes.

Incentives and outputs (Section 4)

4. Section 4 summarises the approach to incentives and outputs and identifies the following key issues for consultation.

(a) Whether a broad approach to incentives for asset management, based around accreditation to appropriate asset management standards and further work to identify appropriate metrics and asset health indices is appropriate?

(b) Whether to broaden and develop the approach to the incentives for availability, security and quality of supply for each of (i) electricity transmission (ii) water transmission (iii) electricity distribution (iv) water distribution and (v) wastewater, as discussed in Section 4 and Annex 1 is appropriate?

(c) Whether to develop new transmission system operator incentives as discussed in Section 4 and Annex 2 is appropriate?

(d) Whether the focus of the information incentives should be (i) planning statements (ii) the existing arrangements applying to the AIS/PCRs/SBAs (iii) ADSSC's security standards report (iv) summer reliability assessment information and (v) leakage/losses reduction reports for water distribution?

(e) How best to incentivise Emiratisation?

(f) How best to incentivise end-use efficiency?

(g) How should the financial impact of incentives be calibrated and should the incentive payments be subject to caps?

Operating expenditure (Section 5)

5. Section 5 discusses the approach to determining operating cost allowances and the regulation of operating costs for the PC5 period. It seeks views, suggestions and evidence on the following main issues.

(a) The initial conclusion that it is not practicable for the Bureau to be approve operating costs on an annual basis, although it may be appropriate to treat certain elements of costs differently in comparison with existing price controls.

(b) Any further suggestions from licensees as to how Deloitte should approach its work on projections of operating costs.

(c) Compelling evidence from licensees supporting claims that costs are efficient, have been appropriately benchmarked, competitively tendered and so on.

Capital expenditure (Section 6)

6. Section 6 discusses capital expenditure and identifies the following initial conclusions and key issues for consultation.

(a) Whether the PC3 capital efficiency scores assessed by the consultants using the process scoring method should be adopted with the following adjustments.

(i) In case of water businesses, an upward adjustment for the difference between scores under process scoring and monetary quantification methods.

(ii) For electricity, water and wastewater businesses, an upward adjustment to take account of local conditions.

(iii) For wastewater business, an upward adjustment to take account of issues particular to the sewerage company.

(b) The initial conclusion that to facilitate consistent treatment, whatever method used for PC3 capex should also be applied to the PC4 capex.

(c) Whether the following approach to future regulation of capex would be appropriate.

(i) More robust provisional allowances for PC5 capex, supported by the work of consultants.

(ii) Annual ex ante review of key elements of companies' future capex plans, focusing on the assessment of project need and project optioneering / design.

(iii) An interim ex post capex review in the middle of PC5 period.

Financial issues (Section 7)

7. Section 7 discusses the financing of capital expenditure through allowances for regulatory depreciation and returns, and the sculpting of price control revenue using NPV calculations. The Bureau's initial conclusions include the following.

(a) The approach used at PC4 to calculate regulatory depreciation and RAVs remains appropriate at this review.

(b) To allow the timely recovery of the foregone financing costs of the difference between efficient and provisional estimates of PC3 and PC4 capex, these financing costs should be allowed as an adjustment to revenue over the PC5 period rather than as an addition to the RAVs (for recovery over 30 years or more).

(c) A range for the real cost of capital of 3.8% to 7.3% with a mid-point average of 5.5% would be appropriate for PC5.

(d) The approach to calculating and sculpting price control revenue used in PC4 remains appropriate at this review.

Glossary

AADC	Al Ain Distribution Company
ADDC	Abu Dhabi Distribution Company
ADSSC	Abu Dhabi Sewage Services Company
ADWEA	Abu Dhabi Water and Electricity Authority
ADWEC	Abu Dhabi Water and Electricity Company
AIS	Annual Information Submission
Capex	Capital Expenditure
CAPM	Capital Asset Pricing Model
CML	Customer Minutes Lost
CPI	Consumer Price Index
DLR	Distribution Loss Reduction
DSM	Demand Side Management
IM	Interface Metering
KPI	Key Performance Indicator
MAR	Maximum Allowed Revenue
Opex	Operating Expenditure
PC1	First Price Control covering the period 1999-2002
PC2	Second Price Control covering the period 2003-2005
PC3	Third Price Control covering the period 2006-2009 (for ADSSC, mid-2005 to 2009)
PC4	Fourth Price Control covering the period 2010-2013
PC5	Fifth Price Control covering the period 2014 onwards
PCR	Price Control Return
PIS	Performance Incentive Scheme
PWPA	Power and Water Purchase Agreement
RAG	Regulatory Accounting Guideline
RAV	Regulatory Asset Value
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SBA	Separate Business Account
STA	Sewage Treatment Agreement
TA	Technical Assessor
TRANSCO	Abu Dhabi Transmission and Despatch Company
WACC	Weighted Average Cost of Capital

Contents

1. Introduction

This Review

1.1 The network companies in the electricity, water and wastewater sector in the Emirate of Abu Dhabi are natural monopolies and are therefore subject to price controls set by the Bureau.

(a) For **AADC**, **ADDC** and **TRANSCO**, the first price controls (PC1) were set in 1999 to run for three years and were then extended for a further year to cover the four year period 1999-2002. The second price controls (PC2) were set in 2002 to apply for three years (2003-2005), followed by the third price controls (PC3) set in 2005 for four years (2006-2009).

(b) In 2007, the Bureau set the first price control for **ADSSC** to apply from the date of establishment of ADSSC (21 June 2005) until 31 December 2009.

(c) In 2009, the current (fourth) price controls (PC4) were set for **AADC**, **ADDC**, **ADSSC** and **TRANSCO** to apply for four years (2010-2013).

1.2 The current PC4 controls are due to expire at the end of 2013 and this requires new price controls to be in place to take effect from 1 January 2014. The first consultation paper issued in April 2012 set out the Bureau's initial views on the main issues that should be considered in setting the PC5 controls. We have received detailed responses from each of the four main network licensees.

Current regulatory framework and price controls

1.3 The first consultation paper summarised the role and main duties and functions of the Bureau as the regulatory body for the water and electricity sector under Law No (2) of 1998 and for sewerage services sector under Law No (17) of 2005.

1.4 It also described and summarised some of the main elements of the current price control arrangements.

(a) The form of the price controls - CPI-X revenue caps that define Maximum Allowed Revenue (MAR) for each company or business for each year of the price control period.

(b) The revenue drivers that link MAR with the company's outputs in terms of units and customer numbers.

(c) The pass through arrangements for costs which are subject to competition or to regulation in other parts of the supply chain.

(d) There are separate price controls for the water and electricity businesses of the companies. Some companies also undertake certain unlicensed activities with the Bureau's consent (as required by their licences). These unlicensed activities are not subject to price controls (except in the case of TRANSCO's unlicensed transmission activities in other Emirates which share common assets with the licensed activities in the Emirate of Abu Dhabi).

(e) The price controls have been set to allow the companies to recover the Bureau's estimate of an efficient level of costs, including allowances for operating expenditure, regulatory depreciation and a return on the regulatory asset base.

(f) The price controls also include a Performance Incentive Scheme (PIS) designed to encourage appropriate quality of service, outputs and performance. These incentive arrangements were first introduced for the PC2 controls and have been enhanced over time.

Related work streams

1.5 This price control review is being supported by a number of related work streams and the work of expert consultants. These work streams are summarised below and discussed further in Sections 5 and 6. The Bureau has already shared with the companies the scope of consultants' work, deliverables and timetable for these work streams and received generally positive responses from the companies.

Review of opex and SBAs

1.6 Deloitte were appointed in February 2012 to support the work on operating costs and SBAs. In phase 1, they worked with AADC and ADDC to understand the significant increases in distribution and supply business costs that have occurred in recent years. The consultants issued their final report for phase 1 in August 2012 to the distribution companies and the Bureau. The consultants have now commenced phase 2 of their work to consider how best to develop the SBAs for the future and delivered their initial report in July 2012. Phase 3 will commence in October 2012 and will involve developing projections of operating costs to support the PC5 proposals, with the phase 3 final report due in July 2013.

PC4 capex review

1.7 During the PC3 capex review, representations were made by the licensees about the time lags associated with the capex efficiency review process. To address licensees' concerns, the Bureau agreed to make such reviews more effective and timely by bringing forward the ex-post efficiency review of PC4 capex. The Bureau appointed the same consultants (KEMA for electricity and Atkins for water and wastewater) to undertake the PC4 capital efficiency work as it used for the PC3 capital efficiency work. In June 2012, the consultants had initial meetings with and issued information requests to the companies. This work will continue into 2013 with the final reports for 2010-2011 capex review due in April 2013 and for 2012 capex review in August 2013.

PC5 capex forecast review

1.8 The consultants appointed for the PC4 capex review will also work on projections of likely capex spend for the PC5 period in order to try and reasonably align the provisional allowances for PC5 capex to be used in setting PC5 controls with spending. The consultants' final recommendations are scheduled for April 2013.

Timetable for related work streams

1.9 The following table sets out the indicative timetables for these work streams.

Table 1.1: Timetable for PC5 related work streams

Work stream	Indicative timescales
PC3 capex review	**April 2011 – June 2012**
• Consultants' final reports issued	June 2012
Review of opex and SBAs	**February 2012 – August 2013**
Phase 1 – Assess reasons for increase in opex for distribution companies over 2006-2010	February 2012 – June 2012
• Consultant's final report issued	August 2012
Phase 2 – Develop robust regulatory accounting arrangements for five companies	April 2012 – February 2013
• Consultant's initial report issued	July 2012
• Consultant's final report to be issued	February 2013
Phase 3 – Prepare forecasts of reasonable opex for four network companies for 2014-2018	October 2012 – July 2013
• Consultant's final report to be issued	July 2013
Phase 4 – Additional work (if any)	October 2012 – August 2013
PC4 capex review and PC5 capex forecast review	**May 2012 – August 2013**
• 2010-2011 capex efficiency review – final reports	April 2013
• PC5 provisional allowances – final reports	April 2013
• 2012 capex efficiency review – final reports	August 2013

2. Approach to regulation

Introduction

2.1 The first consultation paper set out the Bureau's initial thinking on the key challenges and focus for this price control review and sought the views of licensees on these issues, and, asked the licensees about any future plans for restructuring that it might be appropriate to take account of in the price control review. The Bureau suggested that CPI-X regulation remained fit for purpose but that it would be important to ensure that the price control review was properly focused and created appropriate incentives. This section deals with these issues and the suggestions made by licensees about the overall approach and main issues to be considered as part of the price control review.

Objectives and priorities of this review

First consultation paper

2.2 In order to improve the performance of the sector and in the light of the challenging circumstances associated with operating a utility business in the Emirate of Abu Dhabi, the first consultation paper suggested that the focus of this price control review should be the following six core activities (and related incentives).

(a) Licensees should be encouraged to adopt best practice for managing capital projects, and, there should be appropriate incentives for capital efficiency.

(b) The growing asset base of the licensees makes it increasingly important that each company has in place an appropriate approach to asset management.

(c) It is important that licensees face appropriate incentives for network availability, security and quality of supply.

(d) To facilitate effective regulation of the sector, it is important that the regulator has access to high quality information.

(e) Licensees should be able to finance their activities.

(f) Other important considerations – such as the licensees approach to Emiratisation and encouraging efficiency in the end use of electricity and water.

2.3 The paper also suggested that this review could provide an opportunity for a wide-ranging review of regulated activities, including where appropriate significant changes to operational and management arrangements and commercial structures. It asked whether the sector would be willing to drive forward restructuring with a view to improving efficiency and effectiveness and if so how this should be taken account of at this price control review.

Responses

2.4 In response to the first consultation paper, the four licensees generally agreed with all or many of the challenges and priorities discussed in the paper and suggested additional considerations. They also proposed Bureau's close engagement with the licensees and other stakeholders and changes in the approach to regulation to meet future challenges or address the priority areas. Their responses are summarised below.

(a) AADC suggested that the priorities for the price review should also include more active engagement with the Bureau in relation to its annual and longer-term plans, and, providing sufficient resources for network expansion and efficient customer service. It considered that the information it provided to the Bureau was generally of high quality. AADC said that it currently does not have any plans for significant restructuring or outsourcing, but suggested that the arrangements for RASCO should be reviewed.

(b) ADDC agreed that the six core activities should be part of the focus for the price control review and that government ownership and lack of active shareholder pressure for efficiency are key challenges. The company stressed that the separation of supply and distribution was its main priority and that the regulatory arrangements should also reflect this separation. It set out in considerable detail the key challenges for each of the supply and distribution businesses and how changes to the regulatory framework could help address these challenges. Consistent with the views expressed by other licensees, ADDC suggested that additional priorities for this price control review should include more active engagement with the Bureau on its annual and longer-term plans. On restructuring, ADDC indicated it would confer with its owner on the appetite to outsource functions, and, as noted above suggested the separation of distribution and supply businesses. It said such separation would facilitate provision of supply services to ADSSC, promote and clarify its involvement in DSM and tariff issues, and, make the allocation of subsidy more transparent.

(c) ADDC noted the advantages of having the recycled water distribution business together with the potable water business. ADDC also suggested that either electricity purchases from embedded generation (such as renewable energy projects) should be made RASCO's responsibility or RASCO should be rolled into the distribution businesses.

(d) ADSSC agreed that the six core activities would be a reasonable focus for this review and also stressed the importance of joint working between the licensees and the Bureau on key issues. It suggested aligning the Government and regulatory arrangements with respect to funding, changing incentives to provide more effective drivers for improvement and an approach to integrated planning across Government to reduce overlaps and inconsistencies between key stakeholders. On restructuring, ADDSC highlighted its accomplishments in outsourcing operation and maintenance activities and wastewater treatment services through competitive tendering. It also suggested that efficiency at the sector level could be achieved by establishing a single retail company to act as a focus for interfaces with customers (eg billing and collection), and, working and sharing with other companies best practice in common areas such as strategic planning, procurement and management.

(e) TRANSCO considered that the six core activities and incentives summarised above could assist the sector in delivering long-term performance improvement and suggested that the regulatory arrangements for PC5 could increase the proportion of revenue coming from performance incentive payments. It also stressed the need for aligning priorities and noted that all the licensees in the ADWEA group have made substantial progress in identifying a business vision and a balanced score card of metrics designed to reflect key business initiatives. Further, regulatory incentives should be clearly related to a forward plan agreed with licensees that would move the sector further toward international best practice. TRANSCO also suggested that in its case less focus would be required on issues relating to availability, security and quality of supply.

(f) In respect of sector or company restructuring TRANSCO did not see any significant advantages in pursuing these matters at this time. It mentioned some positive effects of the companies' common ownership and absence of shareholder pressure in terms of quality of performance and coordinated decision making.

Assessment and way forward

2.5 Given the broad support from licensees the six core activities and incentives discussed in the first consultation paper will remain a focus for this price control review. A more detailed discussion of matters relating to these incentives is contained in Section 4. The Bureau welcomes the companies' support for further developing incentive arrangements, the licensees' achievements to date and their desire to work more closely with the Bureau in the future. The suggestions for Bureau's close engagement in annual and longer-term plans for operating and capital expenditures are discussed in the subsection below on the basic approach to economic regulation.

2.6 The Bureau is willing to work with licensees to ensure the proper separation of distribution and supply. Nonetheless, it will be important that ADDC provides a realistic and persuasive plan and timetable for the achievement of these objectives. This would provide a suitable catalyst for introducing separate price controls on distribution and supply activities. The issues arising from such separation are discussed in section 3.

2.7 In relation to ADSSC's suggestions on aligning Government and regulatory funding the Bureau will consult further with the Department of Finance and if practicable bring forward proposals in relation to these matters in the Draft Proposals due to be published in March 2013.

2.8 With regards to RASCO, it is not clear that there are any particular advantages in expanding its role in relation to conventional or renewable embedded generation. ADWEC and supply businesses of the distribution companies already have these functions which would be strengthened with the possible formal separation of supply and distribution. Given the reducing scope of RASCO's activities, there may be advantages in merging it with distribution and supply activities. We would be willing to consider issuing consents to the two distribution companies to own and operate RASCO's existing assets and undertake the relevant activities as unlicensed activities subject to certain conditions on charges. It would be helpful to have specific proposals from licensees in relation to these matters, including an explanation of how any new arrangements would provide appropriate protection for RASCO's customers.

2.9 The issues concerning the distribution and supply of non-drinking water are being dealt with by the Bureau and stakeholders as a separate work stream. ADWEA, AADC and ADDC will be consulted further on these matters. Nonetheless, the timetable relating to these matters is likely to stretch beyond this price control review and so any implications for price controls may need to be dealt with later.

Basic approach to economic regulation

First consultation paper

2.10 The first consultation paper suggested retaining CPI-X price/revenue controls in the very broad form of the existing regulatory arrangements, but that significant further work was required to create better focused and more effective incentive arrangements.

Responses

2.11 In their responses to the first consultation paper, all four network licensees agreed in principle that CPI-X revenue controls should be retained as the basic form of economic regulation but highlighted a number of important aspects of the regulatory framework where there was scope for significant improvements. In particular, they suggested the Bureau's close engagement in the licensees annual operating and capital plans, and, the alignment of regulatory initiatives with each company's business plans.

2.12 Individual licensees' responses are summarised below.

(a) AADC considered the CPI-X price control is a widely used form of regulation for similar businesses around the world and should be retained. However, it suggested the Bureau's more active engagement in annual and longer term plans with on-going reviews being incorporated into the regulatory allowances.

(b) ADDC agreed in principle to retain some form of CPI-X revenue controls but suggested closer alignment of regulation with its business plans, the Bureau's support on key issues and the Bureau's annual involvement in both operating and capital expenditure.

(c) In ADSSC's view, the current arrangements provide little or no incentive for improvements in the business and service and stressed the need for the Bureau's closer engagement and an integrated approach to planning across Government.

(d) In TRANSCO's view, the current form of regulation has delivered tangible benefits in terms of encouraging international best practice service delivery, operating and capital efficiency and meeting rapid growth of demand. However, further improvements would require the Bureau's closer engagement in companies' activities, preferably with the flexibility for annual reviews or reporting of operating costs, with logging-up or down adjustments at the next price control review for specific items or initiatives such as Emiratisation, and, the annual or interim review of capital expenditure. In respect of the treatment of operating costs, TRANSCO indicated a flexible approach would justify an enhanced level of reporting, perhaps by extending the role of the TA. It also suggested expanding the Bureau’s supervisory role, particularly in relation to capital efficiency and planning statements.

Assessment and way forward

2.13 Given the general support from licensees and our statutory duties for consistency and efficiency, there is a strong case for retaining CPI-X approach to regulation. Nonetheless, the regulatory framework will need to evolve to address the emerging challenges and concerns expressed by companies.

2.14 Licensees have suggested more involvement from the Bureau in their annual and longer-term plans. While it might be practicable to change the treatment of important elements of operating costs (for example costs relating to Emiratisation), it would not be practicable for the Bureau to agree an appropriate level of operating costs with each licensee on an annual basis. This would involve an unnecessary amount of intrusion by the Bureau in the affairs of licensees, there would be no clear or manageable process for resolving disputes or differences of opinion and it would involve the deployment of significant additional resources, without the prospect any clear advantages over the existing arrangements. Further, there would be a danger that incentives for efficiency improvements would be lost.

2.15 In relation to capital expenditure, the Bureau has already taken steps to make its assessments more forward looking and will consider additional measures, such as an interim review of capital expenditure and more involvement in the annual planning processes for capital expenditure. For instance the Bureau could be more involved and create better incentives around the approval of planning statements (these matters are discussed in more detail in Section 4). Further, the Bureau could be involved in assessing the need case and high level design processes for very large capital projects on an annual basis. This could reduce the risks faced by licensees from the capital efficiency reviews, bring more credibility to the budgets and forecasts made by licensees and help drive forward looking efficiency improvements.

2.16 Nonetheless, the measures taken above would fall short of a fully integrated approach to planning and capital expenditure across all stakeholders. We note that satisfying all stakeholders’ requirements through a single framework or template might be not be practicable. Further, that utility companies around the world have multiple stakeholders (e.g. economic regulator, environmental regulator, health and safety bodies, drinking water regulator, Government departments, shareholders and so on) and such arrangements do not prevent well managed and efficient companies putting forward a single persuasive vision and set of plans for the future, albeit with the same information sometimes presented in different formats.

2.17 Matters relating to operating costs and capital expenditure are discussed in detail in Sections 5 and 6.

Key issues for consultation

2.18 We will welcome comments on any aspect of the issues raised in this section and in particular on the following initial conclusions.

(a) The six areas of priority identified in the first consultation paper (capital efficiency, asset management and performance, availability/security/quality of supply, high quality information, adequate funding and Emiratisation/end-use efficiency programmes) remain valid areas of priority.

(b) CPI-X controls should be retained, but with consideration given to a more flexible arrangements relating to specified elements of operating costs and more timely reviews by the Bureau of capital efficiency, including the forward looking assessment of elements of important capital projects on an annual basis.

(c) In relation to ADSSC's suggestions on aligning Government and regulatory funding, the Bureau will consult further with the Department of Finance and ADSSC on these matters and if practicable bring forward proposals in relation to these matters in the draft proposals due to be published in March 2013.

(d) AADC and ADDC should bring forward proposals to integrate RASCO into distribution and supply activities (for instance, as unlicensed assets and activities), including arrangements to ensure that the interests of the relevant customers would be properly protected.

3. Form of controls

Introduction

3.1 The first consultation paper discussed the issues relating to the form, duration and scope of the new price controls and noted that the current price controls have a number of important features designed to balance the advantages of providing incentives for efficiency against the disadvantages of placing undue risks on licensees. In particular, each price control:

(a) has revenue drivers that link regulated revenue with changes in consumer demand, so adjusting revenue in line with underlying cost drivers

(b) includes cost pass-through terms allowing the recovery of costs that licensees have limited or no control over

(c) is set for a fixed number of years, allowing licensees to retain the benefits of efficiency savings for a number of years but providing the opportunity of a medium term review to take account of unexpected developments and changes in costs, and

(d) has a definition of the scope of activities subject to price control regulation, ensuring that licensees have clarity as to whether a business activity is subject to regulation or normal commercial considerations and risks.

3.2 This Section summarises and assesses the views of the respondents on these issues and sets out a way forward.

Duration of controls

First consultation paper

3.3 The first consultation paper highlighted a number of considerations relating to the duration of new controls including providing incentives for efficiency, reducing exposure to unanticipated outcomes and the advantages of a staggered approach to price control reviews in the future. The paper sought views on whether it would be appropriate to set PC5 controls for ADSSC for 3 years (2014-2016) and for AADC, ADDC and TRANSCO for 5 years (2014-2018).

Responses

3.4 Respondents to the first consultation paper had mixed views on the duration of controls.

(a) AADC said that the period for the new price control could be increased to have 5-years.

(b) ADDC suggested annual reviews of opex and capex performance.

(c) ADDSC stressed the importance of aligning the regulatory framework with its funding arrangements, and that progress on these matters should drive decisions on the duration of the price control.

(d) Given the current maturity of the sector and potential risks from a longer duration, TRANSCO preferred a price control duration of up to 4 years. A shorter duration would be reasonable on the basis of its other suggestions for changes to the regulatory system were to be accepted. Alternatively, TRANSCO suggested a 4-year duration with a mid-term review to correct material deviations in operating and capital costs.

Assessment and way forward

3.5 Sections 2 and 6 discuss a number of important changes to the treatment of capital costs. These changes are designed to increase the flexibility of the regulatory regime, reduce risks on licensees, and increase the amount of joint working on important aspects of the sector's capital plans. Nonetheless, they avoid the disadvantages of trying to approve all aspects of operating and capital costs on an annual basis and protect incentives for efficiency. In relation to the issues raised by ADSSC, Section 2 also explains that the Bureau will consult further with the Department of Finance on these matters. Bearing these factors in mind, the proposals for price controls of duration for ADSSC for 3 years (2014-2016) and for AADC, ADDC and TRANSCO for 5 years (2014 -2018) remain appropriate.

Scope and separation of controls

First consultation paper

3.6 The first consultation paper set out the scope and separation of current price controls including:

(a) the separation of controls for water and electricity businesses

(b) exclusion of revenues from unlicensed activities (subject to the appropriate consent from the Bureau)

(c) inclusion of TRANSCO's unlicensed transmission activities outside the Emirate of Abu Dhabi which share the same assets as licensed activities, and

(d) a definition of regulated revenue for AADC and ADDC that provides an incentive for distribution companies to bill all income which they are entitled under the approved tariffs.

3.7 The paper sought views on whether these arrangements remain appropriate for the future or whether they should be revised.

Responses

3.8 AADC, ADSSC and TRANSCO were content with the existing arrangements on the scope and separation of price controls. ADSSC noted that it should be considered as a single business as its collection, treatment and disposal activities are managed together.

3.9 ADDC suggested organisational separation of distribution and supply businesses, and separate price controls for these businesses. It noted that such separation would facilitate provision of supply services to ADSSC, a focus on the different skills requirements for the two businesses, an improvement in the accuracy of SBAs, encourage its involvement in DSM and tariff issues, and, make the allocation of subsidy more transparent. ADDC also suggested that the supply business should be regulated differently to distribution with supply profits determined on the basis of the risk profile of its revenues, changes to supply revenue drivers and cost pass-through mechanisms.

3.10 ADDC also stated that it undertakes certain activities (such as provision and maintenance of streetlights, consumer wiring and plumbing drawing approval and inspection, and, maintenance services for third parties and consumers) which are not included in its licence nor subject to a Bureau consent. It suggested further consultation to address the regulation of these unlicensed activities.

Assessment and way forward

3.11 Consistent with the views of licensees, the existing scope and separation of price controls would appear to remain broadly appropriate, with the possible exception of the separation of distribution and supply activities for AADC and ADDC.

3.12 The separation of distribution and supply price controls would be a significant challenge. We have already expanded this price control review to incorporate a number of best practices in regulation such as more timely capital efficiency review, independent consultants' advice on more realistic ex-ante provisional capex allowances and opex allowances, and, the development of comprehensive incentive schemes. Therefore, adding further complexity to the review would need to be clearly justified.

3.13 Nonetheless, we are willing to work with the licensees to ensure the proper separation of distribution and supply business. However, it will be important that ADDC provides a realistic and persuasive plan and timetable for the achievement of these objectives. This would provide a suitable catalyst for introducing separate price controls for these businesses. This is important because separation of controls and organisational separation of businesses are resource extensive exercises for the Bureau and the companies. We also agree with ADDC that any separation of controls between distribution and supply would require consideration of a number of changes to the structure and calculations of controls, as summarised below.

(a) Given the pre-dominantly fixed costs and nature of these businesses, we do not see any obvious reason to change the existing 80:20 split between fixed and variable revenue driver terms of the MAR. Nonetheless, it might be appropriate to look again at the composition of the variable revenue driver for supply and remove the units distributed term, to remove any ambiguity about the incentives on the supply business in respect of encouraging electricity and water end-use efficiency.

(b) The pass-through of upstream costs (i.e. bulk purchases of water and electricity and their transmission) would be best suited for the supply businesses along with the pass-through of any distribution costs. Distribution business price controls would then not contain any of these as pass-through terms.

(c) Either a building-block approach using return on RAV or a profit margin on turnover could be used in the calculation of supply price control revenue. The profit margin approach could draw upon the existing mechanism for ADWEC's price control calculations. In any case, the RAV and any future capital spend for supply business would need to be carved out of the RAV for distribution price control. RAVs could be separated between the two businesses based on the ratio implied by the net book values of the assets as per the audited accounts.

(d) Proceeding with separate controls for distribution and supply would also require separate projections of their operating costs.

3.14 We are also considering whether the scope of TRANSCO's price controls (currently covering licensed and unlicensed shared activities) should be expanded to include unlicensed dedicated activities. This is because of the natural growth and development of the shared network between licensed and unlicensed activities (and hence the gradual decrease in dedicated assets) over time and the apparent lack of a due process for allocation of assets, operating and capital costs and units/demands between unlicensed shared and dedicated activities. Such an enhanced scope for the price control would eliminate the need for such allocations and would improve the visibility and regulatory oversight of the transmission network. To ensure no undue discrimination between groups of customers TRANSCO would need to apply the same transmission use of system and connection charging principles to all customers.

3.15 If we were to proceed with this proposal, it would be necessary to make reasonable allowances for capital and operating costs in PC5 for presently unlicensed dedicated activities. With respect to the existing unlicensed dedicated assets, a pragmatic approach would be to apply the PC4 capex efficiency score (currently being assessed) to the current net book value of such assets to estimate their efficient value which could then be rolled into the RAVs.

Revenue drivers

First consultation paper

3.16 The first consultation paper asked whether the existing revenue drivers and their weights should be retained or changed and whether the Bureau should use the licensees' projections of demands and customer numbers as a basis for the projections of revenue driver to be used in calibrating the new price controls.

3.17 For the current price controls, each company / business has an 80:20 split of fixed and variable revenue with the variable part linked to two revenue drivers (except for ADSSC, which has one revenue driver), as summarised in table 3.1 below.

Table 3.1: Current revenue drivers

Company	Revenue driver	Revenue driver weight in MAR formula
AADC / ADDC (both water and electricity)	Fixed term	80%
	Customer numbers	15%
	Metered units distributed	5%
TRANSCO (both water and electricity)	Fixed term	80%
	Metered peak demand	10%
	Metered units transmitted	10%
ADSSC	Fixed term	80%
	Annual flow at treatment plants	20%

Responses

3.18 Respondents made the following comments.

(a) AADC supported the continuation of the existing revenue drivers and suggested either their weights be increased or new revenue drivers such as network length be developed.

(b) ADDC was concerned about the contradictory incentives of using units distributed in the revenue driver but supported continuation of ADDC's existing two revenue drivers for supply business and suggested number of connections, network length and capacity as revenue drivers for distribution. It also suggested weights of 90:10 for fixed and variable elements. ADDC supported the use of sector forecasts as the basis of revenue driver projections and noted that Bureau has sight of all licensees' forecasts and TA reviews of these forecasts.

(c) ADSSC supported weights of 80:20 for fixed and variable elements but noted the same split was not accepted by the Bureau for its customer tariff design. It also expressed its willingness to consider an additional revenue driver, and, suggested that the Bureau should work more closely with other entities to develop agreed baseline figures for key data such as population growth, which could then be used by ADSSC to predict flows and loads to drive its investment and other costs.

(d) TRANSCO supported the 80:20 split for fixed and variable elements and suggested a single volume based revenue driver as peak demand is closely related to volume and their relationship is likely to change only slowly over time.

Assessment and way forward

3.19 Given the broad support expressed by licensees the Bureau intends to retain the 80:20 split of weights for the fixed and variable elements of revenue. We also intend to retain the existing revenue drivers for all companies (with some possible refinements discussed below) and will consider an additional revenue driver for ADSSC of customer numbers, consistent with that for the distribution companies.

3.20 The distribution companies' proposals for revenue drivers are inputs to companies' provision of services rather than output or customer demand based measures, and, we remain to be convinced that such an approach is justified. We also do not consider the arguments put forward by TRANSCO represent a compelling case for change.

Nonetheless, we do intend to modify the definitions of TRANSCO's revenue drivers so that its incentives for compliance with the MDEC code derive primarily from the incentive arrangements discussed in Section 4, consistent with the incentives facing the electricity distribution businesses. In this regard, we are considering using reasonably (as assessed by the TA) estimated metered units and metered peak demand (irrespective of strict compliance with MDEC) as revenue drivers for TRANSCO.

3.21 As noted above if we proceed with the separation of supply and distribution then it would be appropriate to remove the units driver from the supply business price control, to give the business clear incentives with respect to energy efficiency. It is not clear that whether such arrangements would be appropriate in the relation to electricity distribution, where the business needs to be incentivised to make the investment necessary for network expansion. It should also be noted that the units term of revenue driver only accounts for about 5% of the MAR.

3.22 It is not the responsibility of the Bureau to carry out demand forecasting (or provide estimates of related factors such as population growth), which should be a core business activities for licensees, and so the Bureau will not take responsibility for the studies suggested by ADSSC. Nonetheless, we will review the companies' projections of their revenue driver projections, which should be in their 2012 AIS submissions (to be received in October 2012). These will be cross checked against each other for consistency, and, any evidence that the licensees provide in support of these projections. This assessment will be set out in the PC5 draft proposals (due in March 2013).

Cost pass-through arrangements

First consultation paper

3.23 The first consultation paper explained that the main costs allowed as pass-through items in the current price controls are: (a) for distribution companies, bulk power and water purchases (including from embedded generation) and transmission charges, and (b) for ADSSC, payments under the long-term Sewage Treatment Agreements (STAs), all subject to companies' economic purchasing obligation. It asked whether the existing approach to cost pass through should be retained and sought views on a different treatment for the Bureau's licence fees, STA costs and Emiratisation costs.

Responses

3.24 Licensees supported the continuation of the existing pass-through costs and made comments as follows.

(a) AADC supported retention of the existing cost pass-through arrangements.

(b) ADDC suggested that Bureau's licence fee should be a pass-through and that progress on Emiratisation should drive higher allowances for operating costs. It also said that the separation of distribution and supply price controls would require changes to cost pass through arrangements.

(c) ADSSC supported the continuation of pass through of STA costs and did not see any reason to question it at this review. The company suggested the pass-through of Emiratisation costs as these are driven by specific Government initiatives. It also proposed a pass-through treatment for costs under its network operation and maintenance contracts which have recently been subject to review and competitive tendering.

(d) TRANSCO highlighted the need for a process to ensure that all pass-through costs are incurred in an efficient and effective manner. In its view, connections to the transmission network are currently sought without a detailed evaluation of the distribution network configuration and demand forecast and, as TRANSCO cannot refuse to connect as per its licence, any capital inefficiency should be the responsibility of the relevant distribution licensee.

Assessment and way forward

3.25 In view of the broad support expressed by licensees, the Bureau intends to retain the existing cost pass-through arrangements and give consideration to similar treatment to Bureau's licence fees. The matters relating to Emiratisation are discussed in Section 4.

3.26 We accept the point made by ADDC that if supply and distribution price controls are separated then this will require a change to cost pass through arrangements.

3.27 With regards to ADSSC's operation and maintenance contract costs, while we agree that competitive tendering process may result in cost saving and improved performance, this does not necessarily mean a pass-through treatment. ADSSC will have the opportunity to make its case in relation to these matters to Deloitte during the phase 3 work on PC5 opex projections. On the STA costs, we have not been provided with evidence demonstrating the need for and competitiveness of these costs. One option could be to use our capital efficiency consultant Atkins to undertake a review of these issues.

3.28 We share TRANSCO's concerns about inefficient capital expenditure and make proposals in Section 6 to strengthen the regulation of capital efficiency.

Key issues for consultation

3.29 We welcome views on any aspect of the issues raised in this Section and in particular on the following initial conclusions.

(a) PC5 controls should be set for ADSSC for 3 years (2014 to 2016) and for AADC, ADDC and TRANSCO for 5 years (2014 to 2018).

(b) We are willing to work with the licensees to ensure the proper separation of distribution and supply businesses provided that ADDC provides a realistic and persuasive plan and timetable for the achievement of these objectives; otherwise the existing scope and separation of controls should be retained. Such separation would probably require significant changes to the structure and calculations of price controls.

(c) We are also considering whether the scope of TRANSCO's price controls (currently covering licensed and unlicensed shared activities) should be expanded to include unlicensed dedicated activities outside the Emirate of Abu Dhabi.

(d) The 80:20 weights for the fixed and variable terms of the MAR remain appropriate. Nonetheless, the number of customers should be included as an additional revenue driver for ADSSC and TRANSCO's revenue drivers should be changed to reasonably estimated metered units and metered peak demands, irrespective of strict compliance with MDEC. Further, if we proceed with the separation of supply and distribution, it would be appropriate to remove the units term from the revenue driver for the supply business price control, to give the business clear incentives with respect to energy and water end–use efficiency.

(e) The existing cost pass-through arrangements should be retained, perhaps with this treatment extended to the Bureau's licence fees, but with any further increases in the scope of cost pass through arrangements would require compelling evidence from licensees in support of such changes.

4. Incentives and outputs

Introduction

4.1 Incentives and outputs form key elements of regulatory frameworks internationally and provide an opportunity to improve sector focus and incentivise better service, efficiency, transparency and performance. The first consultation paper set out the Bureau's initial views on the main incentives and outputs that should be the focus of this price control review. These were capital efficiency, asset management, availability/security/quality of supply, the provision by licensees of high quality information, the appropriate funding of licensed activities and other important sector objectives (in particular Emiratisation and end-use efficiency programmes).

4.2 Sections 2 and 3 have already discussed the licensees' response to the overall approach to the price control review. Matters relating to capital expenditure and capital efficiency are discussed in Section 6 and matters relating to the funding of licensed activities are dealt with in Section 7. Other incentives are discussed in this Section, in particular those relating to:

(a) asset management and performance

(b) availability, security and quality of supply

(c) transmission system operator incentives

(d) the provision of high quality of information

(e) Emiratisation, and

(f) end-use efficiency.

4.3 There will be significant challenges associated with specifying and calibrating such incentives and outputs within the time available during this price control review. It may be that some of these matters will need to be subject to longer-term work streams and that such incentives will not be fully implemented until the middle of the price control period or at the next price control review.

4.4 Annexes 1 through 3 referred to in this Section for details on the proposed incentives under paragraphs 4.2(b), 4.3 (c) and 4.3(d) above will be issued to the four network companies separately to this second consultation paper.

Incentives for asset management and performance

First consultation paper

4.5 The first consultation paper explained that as the asset base of licensees expands, issues relating to asset management and performance will become more important. It noted that although incentives relating to network performance and security also provide incentives for asset management, it would be important to consider whether more direct incentives for asset management should be introduced to complement and strengthen these broader incentives. It also noted that TRANSCO has adopted business processes consistent with PAS 55 accreditation, and, that the Bureau could seek to monitor and/or incentivise a range of new metrics, perhaps including:

(a) equipment failure rates

(b) asset replacement and overhaul rates, and

(c) asset utilization factors.

Responses

4.6 In broad terms, licensees supported bringing incentives in line with the key performance indicators for each business, including those relating to asset management. Licensees also indicated that the review should consider whether they should be incentivised to achieve standards such as PAS 55.

4.7 AADC explained the importance of taking account of whole life costs, asset condition and preventative maintenance plans in developing an appropriate approach to asset management.

4.8 ADDC noted that asset management is an area where improvements could be made but that it would be important to improve the underlying information on matters such as equipment failure rates before developing new incentives.

4.9 TRANSCO said that it had already achieved 28 point PAS 55 accreditation and was now working towards the 39 point ISO 55000 accreditation. Nonetheless, these steps were only part of a wider process that the business was going through in order to improve asset management and in the longer-term it would be necessary to develop and incentivise additional output measures to incentivise best practice. There might be a case for annual reviews of best practice, with it being premature to adopt the metrics discussed in paragraph 4.5 above, and, that in any case such relatively simple metrics might not provide appropriate incentives and that perhaps the Bureau should consider the development of broader based asset health indices.

4.10 ADSSC said that output focused targets based on the completion of specific initiatives could provide greater incentives for asset management, and gave the example of PAS 55 as a standard for best practice in asset management. It suggested incentives could be set for a licensee achieving PAS 55, with the size of the incentive payment related to the costs of achieving accreditation. It noted the metrics described in paragraph 4.5 and suggested that a wider set of measures reflecting the approach it had adopted in its performance based operation and maintenance contracts might be a more appropriate way forward.

Assessment and way forward

4.11 The Bureau accepts the views of licensees that it will be appropriate to:

(a) improve the quality of the underlying data on assets and asset management so that the licensees have a solid basis on which to improve performance and report to the Bureau, and

(b) ensure that incentives for asset management are sufficiently broadly based, encompassing data quality, the successful implementation of inspection and maintenance programmes, accreditation to international asset management standards and appropriate metrics.

4.12 Specifically in relation to international asset management standards, the Bureau notes the conclusions of its recent Asset Management Review of the electricity network companies, which indicates that the implementation of PAS 55 by TRANSCO had a positive impact on asset management performance. The Bureau intends to provide price control incentives for all licensees to achieve the accreditation of PAS 55 and/or ISO 55000 during the PC5 period.

4.13 Where data quality is concerned, there may be merit in involving the TA in these matters and consistent with suggestions made by TRANSCO perhaps harmonising this work with post-PASS 55 surveillance reviews. These reviews would be designed to ensure that licensees continue to make progress with asset management and would be reported to the Bureau. It is for consideration whether such reviews should be subject to price control incentives.

4.14 Improving data quality and accreditation to international standards will not in themselves guarantee that a licensee has embraced and implemented best practice with respect to asset management. Therefore, the Bureau intends to work with licensees to create a broad based set of metrics or asset health indices, with a view to developing a fully rounded set of price control incentives. The Bureau will initiate a series of meetings with licensees in the near future with a view to developing an initial specification for these metrics in 2013.

Incentives for the availability, security, and quality of supplies

First consultation paper

4.15 The first consultation paper summarised the broad regulatory framework relating to the availability, security and quality of supply, which involves a range of different regulations and licence conditions.

4.16 It also explained the important incentive arrangements that are part of the price controls. These include the Performance Incentive Scheme with both Category A and Category B incentives. Category A indicators provide direct incentives with a potentially greater level of materiality, compared to the indirect incentives provided by Category B indicators. The following tables show the current category A and B indicators that are relevant to the availability, security and quality of supply (but exclude a number of metrics dealt with in the subsection below on transmission system operator incentives) with the indicators introduced at the last price control review shown in red.

Table 4.1: Category A quality indicators

Company	Electricity	Water	Wastewater
AADC / ADDC	Customer Minutes Lost per Customer Interruptions per Customer (until 2009) thereafter SAIFI Distribution Loss Reduction (DLR) indicator Interface Metering (IM) indicator	Water Quality DLR indicator IM indicator	
TRANSCO		Water Quality	
ADSSC			

Notes: SAIFI = System Average Interruption Frequency Index

Table 4.2: Category B quality indicators

Company	Category B Indicator
AADC / ADDC	Technical KPIs (including SAIFI for worst served customers and water quality sub-indices)
TRANSCO	Technical KPIs (including water quality sub-indices)
ADSSC	Technical KPIs Performance of sewerage system (e.g., availability and reliability) Customer complaints (e.g., in relation to odour and flooding) Compliance with standards at treatment plants Meeting targets for recycling of treated effluent and bio-solids Environmental performance

4.17 The first consultation paper asked how the present incentive arrangements could be best improved and in particular:

(a) whether the metrics and incentives relating to water distribution and transmission could be improved – for instance by introducing incentives for maintaining pressure and availability in water distribution networks, and/or replacing existing Category A water quality indicator with water quality indices

(b) whether to introduce more direct incentives for service levels to worst served customers

(c) how to further develop the availability indicator for TRANSCO and CML and SAIFI indicators for AADC and ADDC, and

(d) how to develop better incentive arrangements relating to ADSSC.

Responses

4.18 AADC noted the importance of aligning the price control incentives and the key performance indicators for its businesses. It also said that the performance of each of its distribution networks depends in part on the performance of the transmission networks, and that this needs to be taken properly into account in designing and implementing incentive arrangements. It supported the suggestions regarding incentives for maintaining water pressure, water distribution system availability, water quality indices, service levels to worst served customers, and CML and SAIFI indicators.

4.19 ADDC said that regulatory incentives should be based on standard industry metrics such as SAIDI and SAIFI (segregated into planned and unplanned interruptions) and that where practicable it will be appropriate to automate the collection of the underlying data that supports these metrics. In respect of water, ADDC suggested the existing water quality incentives need to be revised in consultation with licensees and in the context of an agreed Water Management Plan. While ADDC supported in principle an obligation to guarantee water quality within consumers' premises, it suggested that this should be a supply business obligation with the distribution business having responsibility up to the connection point. It commented that a long term plan for direct pressure inside customer premises could be implemented once water losses and usage are better understood and managed.

4.20 ADSSC explained that the development of Security Standards, Trade Effluent Control Regulations, and, Recycled Water and Biosolid Regulations had already significantly improved its network performance and security. It suggested that further time is required to complete the implementation of these standards and regulations and in the short-term no new major regulations should be introduced. Nonetheless, ADSSC explained that targets and incentives based on the completion of specific initiatives could be useful in improving overall business and network performance, with the identification and specification of these initiatives requiring further discussion with the Bureau.

4.21 TRANSCO said that while availability, security and quality of supply were important, these incentives required less focus than other aspects of the overall incentive framework created by the price controls. It noted that the security and availability of its networks compared well with international benchmarks, but that there was scope for the better measurement and recording of quality metrics and for consideration of whether further incentives were required in relation to these matters. It said that the existing incentive for availability is broadly appropriate, but that consideration should be given to providing a dead band in relation to performance, where there would be no reward or penalty payments. TRANSCO also said that incentives should be calibrated so that licensees are not unduly penalized while issues such as data quality are dealt with, and, that the overall financial impact of incentives should be reasonable and proportionate.

Assessment and way forward

4.22 The Bureau welcomes the broad support expressed by licensees for incentives relating to availability, security and quality of supply. We support the view expressed by ADDC that where practicable incentives should be based on standard international metrics of network performance, but do not rule out the use of bespoke incentives to suit the particular circumstances of the Emirate of Abu Dhabi where appropriate. Consistent with the views of licensees, it will also be appropriate to discuss in detail with licensees the specification of these incentive arrangements, have in place agreed programmes with licensees to develop better underlying data and information, and, make sure that the materiality of any incentives is proportional.

Electricity transmission

4.23 Where electricity transmission is concerned, the Bureau's initial thinking is that incentives should be strengthened in relation to network reliability and compliance with security standards. It will also be necessary to ensure that TRANSCO continues to face incentives with respect to the provision of appropriate interface metering. Initial suggestions for incentives include the following.

(a) Reliability, including faults per 100 transformers and faults per 100km of transmission cable and overhead lines.

(b) Demand at single circuit risk, which could be measured as the proportion of energy or peak demand under single circuit risk as a result of non-compliance with planning standards.

(c) Protection system performance, which could be measured as the proportion of circuit breaker operations that malfunction (including failures to trip, slow trips, unwanted trips etc).

(d) Interface metering, in particular the proportion of energy measured by MDEC compliant meters. The existing revenue drivers in the price control formula will be modified so that this incentive provides the price control financial rewards/penalties in relation to MDEC compliance.

4.24 A more detailed initial specification for these metrics is set out in Annex 1. Nonetheless, it is important to stress that at this stage these metrics (and their initial specification) and possible incentives are very much initial thinking and are for further discussion with licensees.

4.25 Matters relating to incentives for electricity transmission network availability and losses are discussed below in the subsection on transmission system operator incentives.

Water transmission

4.26 As envisaged in the first consultation paper, it will be appropriate to broaden the incentives for water quality and replace the existing water quality indicator with a system of three water quality indices – encompassing a disinfection index, a maintenance index and a reservoir integrity index. This approach should give a more round set of incentives for water quality TRANSCO, while retaining focus on parameters over which it has direct influence or control. A more detailed specification of these metrics is set out in Annex 1.

4.27 Water transmission network availability is discussed below in the section on transmission system operator incentives.

Electricity distribution

4.28 In relation to electricity distribution it will be appropriate to retain the existing incentives relating to interface metering and make more robust the incentives and metrics relating to distribution losses and network availability (SAIDI and SAIFI). It will also be appropriate to develop incentives relating to worst served customers and consider the development of new incentives relating to customer services. In order to refine and improve the calculation of SAIDI and SAIFI, and introduce metrics and incentives relating to worst served customers it will be necessary for AADC and ADDC to have in place audited connectivity models, which would allow the impact on customers of network interruptions to be recorded in a systematic manner. The introduction and verification of such models will also be subject to price control incentives.

4.29 The intention is to broaden the existing incentives, while retaining focus on key areas of business performance. The above incentives and suggestions for change can be summarised as follows.

(a) The interface metering indicator would be as used in the existing price control with no changes to the method of calculation.

(b) Each company would be incentivised to have in place by 1 January 2014 a connectivity model approved by the TA.

(c) In relation to the existing distribution losses reduction indicator, there will be further clarification of the definition of energy entering and leaving the distribution network. Further details are set out in annex 1.

(d) The calculation of SAIDI and SAIFI would be revised so that it takes appropriate account of the differences between planned and unplanned interruptions. In the case of unplanned interruptions 100% of the customer minutes lost and customer interruptions would count towards the calculation of SAIDI and SAIFI, and, 50% in the case of planned interruptions. Customers would need to be given two calendar days advance notice for an interruption to count as a planned interruption. Further details are set out in Annex 1.

(e) The number of worst served customers (defined as customers experiencing at least 8 interruptions per year from high voltage incidents) to be progressively reduced over time. Further details are set out in Annex 1.

(f) Consideration will also be given to additional customer service incentives. For instance, relating to the provision of connection offers, the completion of cable terminations, LV drawings/approvals, requests for energisation and requests for meter installation being carried out within prescribed timetables. These matters will be discussed further with licensees.

Water distribution

4.30 For water distribution, the proposed approach will be to develop incentives for water quality based on broader based indices, consistent with the approach set out above for water transmission. It will be appropriate to retain the existing incentives for distribution loss reduction and interface metering, consistent with the approach for electricity distribution. A new incentive for distribution system availability will be developed, also consistent with the approach for water transmission.

4.31 New metrics and information will be calculated and gathered in relation to system pressure and interruptions/continuity of water supplies. The intention is that over time the scope of the water distribution incentives will be broadened to better reflect key aspects of business performance.

4.32 Proposals for incentives therefore include the following, further details of which are set out in Annex 1.

(a) Improving water quality based on broader indices.

(b) Reducing restricted or intermittent water supplies to customers.

(c) Removing ground storage tanks in low-rise residential premises.

(d) Improving interface metering.

(e) Reducing distribution losses.

(f) Improving water distribution system availability.

Wastewater

4.33 In relation to ADSSC, the Bureau is proposing to develop metrics and incentives based largely around the existing Recycled Water and Biosolids Regulations, consistent with ADSSC's views about focusing on the successful implementation of these important regulations.

4.34 Proposals for incentives include the following.

(a) Biosolid reuse, with the objective of reducing the percentage of biosolids sent to landfill and increasing the proportion of biosolids used sustainably.

(b) In relation to recycled water supply, incentivising the proportion of recycled water supplied to third parties and managed through an approved supply agreement. The intention is to make efficient use of the Emirate of Abu Dhabi's scarce water resources, and, where it is practicable and economic to do so substitute non-drinking water uses of potable water with recycled water. This would reduce the demand for desalinated water and make water production more economically and environmentally sustainable.

(c) Improved flow metering at tanker reception facilities.

4.35 For details of the above incentives are included in Annex 1.

4.36 Further data would also be gathered on collection system overflows, with the intention of allowing the introduction of an incentive in the middle of the next price control period.

Transmission system operator incentives

First consultation paper

4.37 The first consultation paper dealt with transmission system operator incentives as part of the discussion of incentives for the availability, security and quality of supply. Given the increasing importance of these issues over the coming years (driven primarily by the connection of additional generation and demand growth), transmission system operator role, objectives and incentives are discussed separately in this consultation paper.

4.38 Key questions raised in the first consultation paper included whether a full set of incentives should be introduced for the transmission system operator (TRANSCO) with the following possible scope:

(a) submission of daily transmission constraint data, including water constraints

(b) meeting agreed short term demand forecasting error targets

(c) incentives to optimise spinning reserve deployment

(d) incentives to reduce deviations from the despatch schedule

(e) reducing the costs of inadvertent energy exchanges across interconnectors

(f) incentives for system availability

(g) a transmission losses target, and

(h) submission of agreed reports on due dates.

Responses

4.39 TRANSCO recognised that the Bureau wishes to create additional incentives for efficient system operation. It suggested such incentives would need to be phased in over an appropriate period and that in a number of areas reporting arrangements and processes would need to be strengthened before new incentives could be put in place. TRANSCO's comments to the possible incentives (a) to (h) discussed in the paragraph above are summarised below.

4.40 It explained that it either saw little value in or that incentives were not appropriate in relation to:

(a) spinning reserve (where TRANSCO said that a combination of suitable engineering operating procedures and the unit commitment model should ensure economic despatch), and

(b) inadvertent energy exchanges (TRANSCO stated that adequate incentives already exist in the GCCIA).

4.41 In relation to a number of the proposed incentives, TRANSCO suggested further discussion and progress on developing reporting arrangements would be appropriate, before the development of new incentives could be sensibly considered. In particular:

(a) daily transmission constraint reporting (TRANSCO acknowledged that better reporting of transmission constraints would be important, but that daily reporting would not be appropriate and more discussion would be needed on the best form of reporting), and

(b) reducing deviations from the despatch schedule (with TRANSCO suggesting that better reporting arrangements should be developed before incentive arrangements could properly be considered).

4.42 TRANSCO supported incentives in relation to:

(a) short-term demand forecasting

(b) incentives for system availability, and

(c) transmission losses.

Assessment and way forward

4.43 The transmission system operator is concerned with maintaining security and balancing the system such that reasonable demands for electricity and water can be met. In performing its balancing function, the system operator coordinates the despatch of water production capacity and electricity generation capacity to ensure that demands for electricity and water are securely met each day, taking account of constraints on the operation of production capacity and constraints on the water and electricity transmission networks. The efficient discharge of these duties is critical to the overall costs of the sector and the economics and reliability of the water and electricity transmission networks. In addition to its hourly system balancing and constraint management activities, the system operator also has a role to ensure efficient and effective cross-border balancing through the efficient use of interconnectors and reserve sharing. Maintaining security of supply in the face of potential fuel constraints and other external uncertainties is another area of responsibility.

4.44 Bearing these important roles and responsibilities in mind, and the rapid growth of demand, production capacity and the transmission networks over the coming years, it will be important to ensure that over time the system operator is appropriately incentivised and equipped with the appropriate means to undertake its roles and deliver desired outputs. To this end, a set of transmission system operator output and cost incentives is proposed to be introduced in PC5. These incentives aim to ensure ongoing reliability and security of supply while operating the electricity and water system in a reasonable cost efficient manner.

4.45 The performance and incremental benefits of an initial set of incentives are proposed to be monitored and reviewed every 2 years in order to deliver an effective incentive scheme both in the short term and over the long term. This is important given a number of external factors that may affect system operation and cost efficiency especially over a longer period (eg, fuel constraints and price, energy policy, development of interconnections etc).

4.46 In relation to TRANSCO's comments on the specific metrics and incentives discussed in the first consultation paper, the Bureau accepts that further discussion is required in order that new incentives can be sensibly developed, and, in certain instances better information and reporting arrangements will also be needed. To promote debate and the development of an appropriate incentives the Bureau's latest thinking on the scope for transmission system operator incentive arrangements is set out below:

(a) development of best practice constraint management policies and a monthly report on constraint management (electricity and water)

(b) a water transmission constraint reduction target

(c) short term demand forecasting incentive (electricity only)

(d) a spinning reserve deviation incentive (electricity only)

(e) incentives to reduce deviations from the despatch schedule (electricity and water)

(f) incentives to ensure the accuracy of inputs to the UC schedule (electricity and water)

(g) incentives for system availability (electricity and water)

(h) incentives to minimise energy lost from incidents on the transmission system (electricity only), and

(i) transmission losses targets (electricity only).

4.47 Further background to the above incentives is set out below.

(a) In relation to spinning reserves (item (d) above), the Bureau considers that new incentives could sharpen TRANSCO's operating practices and make a significant contribution to the overall efficiency of electricity system operation.

(b) Improving the accuracy of inputs to UC scheduler and minimising the deviations from the UC schedule (items (e) and (f) above) are two activities that could bring significant savings, consistent with the results of earlier studies undertaken by the Bureau and its consultants.

(c) As mentioned in the first consultation paper in relation to the performance indicators on electricity and water transmission availability (items (g) above), the following is under consideration:

   (i) As robust data on actual performance is now available, the performance target could be defined in absolute terms rather than the existing target which is based on performance in the preceding year.

   (ii) The water availability indicator could be better aligned with electricity availability by reducing the number of water system components from five to three (namely, pumps, transmission lines and storage tanks).

(d) Energy lost due to incidents on electricity transmission system is an existing incentive.

4.48 A more detailed specification of each of these possible incentives/metrics is set out in Annex 2. The Bureau will seek to meet with TRANSCO to discuss the scope of these incentives and their detailed specification in the near future.

Incentives for provision of high quality information

First consultation paper

4.49 The first consultation paper explained the importance of receiving high quality information from licensees in order to both promote effective regulation and to strengthen and improve sector wide planning and decision making. It also summarised the present requirements on licensees to provide information.

4.50 Each of the four main network companies have licence requirements to prepare and send to Bureau (and in certain instances other interested parties) a range of information. The Performance Incentive Scheme reinforces these arrangements with a system of penalties and rewards for the timely provision of key information subject to certain basic quality tests. At present, the key information submissions made by licensees include the AIS, PCRs and SBAs. The AIS and certain inputs to PCRs are subject to review by an independent Technical Assessor (TA) and the PCRs and SBAs are subject to review by each licensee's external financial auditors. These external reviews are designed to ensure the provision of high quality information by the licensee.

4.51 The first consultation paper asked for views on how the incentives for the provision of information could be improved, whether the Bureau should make more use of independent reviews to help improve the quality of information, whether the Bureau should adopt a more focused approach to gathering information and whether incentives should be introduced to improve the quality of planning statements and other similar information.

Responses

4.52 AADC stressed that it takes a great deal of care in providing information to the Bureau and that the scrutiny provided by the TA means that the data is reliable and trustworthy. It also suggested that the Bureau should adopt a more focused, streamlined and efficient approach to gathering information, as it was presently being asked to provide similar information/data but in different formats, and, some of the Bureau's information requests were bulky and cumbersome. AADC suggested that a better focused approach would allow it to further improve the quality of information provided to the Bureau. It also suggested an alternative approach to ensuring the quality of information would be to set up a committee of licensee and Bureau personnel to scrutinise the quality of its information submissions.

4.53 ADDC noted that it is making considerable efforts to automate data gathering and improve the quality of information in relation to its assets, productivity and network performance. Together with its suggestions to better separate distribution from supply activities, these initiatives should lead to better quality and more focused information being provided to the Bureau. ADDC also suggested that the current arrangements for the TA are appropriate and the better alignment of the price control with its business plans would ensure that further improvements in information systems would be delivered efficiently and effectively.

4.54 ADSSC supported the role of the TA in auditing the AIS and PCRs. Nonetheless, it suggested that the Bureau adopt a more focused approach to information gathering that properly balances the cost of gathering data with the benefits from having additional information. ADSSC also said there should be less duplication between the Bureau's regulatory requirements – such as the AIS, SBAs and planning statements. Finally ADSSC stressed the importance of involving the Bureau in its capital planning process, so that there is an agreed view on future investment needs and priorities.

4.55 TRANSCO said that the use of the TA had been effective in improving the quality of information provided to the Bureau. Further, it noted that independent reviews undertaken as part of a coordinated improvement programmes – such as the recent Asset Management Review undertaken by the Bureau could add value to the sector. It also said that requirements on licensees to gather data should only be introduced as part of a coordinated programme, with an agreed timetable and objectives, and, where it can be shown that they create value (either for the licensee or the Bureau).

Assessment and way forward

4.56 The Bureau agrees that requirements relating to the provision of information should be coordinated and focused on key areas of activity that have real benefits in terms of sector performance or promoting effective regulation. While the timeliness of information is significant, the most important factor is the quality of information provided by licensees. This is not straightforward to incentivise.

4.57 Bearing the above in mind the Bureau has identified the following areas of focus for incentives relating to the provision of information.

(a) Planning statements (all network licensees) – new incentives to be introduced for the timely submission of planning statements and for the quality of these statements. A timetable with incentives will be established based on the provision of a timely first draft and the appropriate intermediate steps towards final approved planning statements, with the quality to be assessed by using both TA (alongside AIS by end October each year) and Bureau resources. The Bureau will publish Regulatory Instructions and Guidance to provide additional clarity on what is expected in terms of timelines, content and format of statements.

(b) AIS/PCR/SBA submissions (all network licensees) – existing arrangements to be broadly retained but timeliness incentives to be reduced and so made more proportional. The Bureau also has a separate work stream relating to the SBAs and the development of Regulatory Accounting Guidelines (RAGs) designed to improve the quality and usefulness of accounting data provide by sector companies. This is likely to result in combining the SBA and PCR into one information request and further streamlining of the AIS.

(c) Security standards report (ADSSC) - to be incentivised for timeliness (by end of April each year) and subject to review by the TA alongside ADSSC's PCR (by end of April each year).

(d) Summer Reliability Assessment (SRA) information (AADC, ADDC and TRANSCO) – incentives for the timely provision and quality of information (with the assessment of quality to be conducted by the Bureau). The Bureau will issue SRA Instructions and Guidance, to provide clarity to licensees on the information and processes necessary for the provision of this information.

(e) Leakage/losses reduction reports (AADC and ADDC, water distribution) - incentives for the timely provision and quality of information (with the assessment of quality to be conducted by the Bureau). The Bureau will issue a template and guidance for the information to be provided by licensees.

4.58 Over the course of the PC5 period it may be that other areas of information provision will need to be developed. For instance, in relation to ADSSC these may include its treatment and disposal registers, trade effluent compliance report and low risk trade effluent register.

4.59 For details of the proposals for new incentives relating to planning statements, security standard reports, summer reliability assessment and leakage/losses reports are set out in Annex 3.

Emiratisation

First consultation paper

4.60 The first consultation paper noted the importance of properly taking account of Emiratisation in the price control review, especially with regard to investment in people and new training and apprenticeship schemes.

Responses

4.61 AADC and ADDC stressed the importance of continuing to develop programmes for Emiratisation and the need to properly take account of the associated costs in making projections of operating costs for the PC5 period. They also said the Bureau and licensees should continue to work together on Emiratisation policies and plans.

4.62 ADSSC explained that the costs associated with Emiratisation should be treated as pass through costs and should be excluded from any efficiency comparisons based on international benchmarks.

4.63 TRANSCO noted the additional costs associated with Emiratisation and welcomed the joint work that the Bureau had undertaken with licensees relating to apprenticeships. It suggested that the existing collaborative working could be further developed to allow the annual reporting and approval of costs, which could then be recovered through the price control. TRANSCO said such arrangements would avoid the need to develop further incentives relating to Emiratisation targets.

Assessment and way forward

4.64 The Bureau welcomes the comments made by licensees about the importance of Emiratisation.

4.65 Further important questions remain on whether more sector wide coordination is required in developing strategies, how any strategies and plans relating to Emiratisation should be assessed, and, whether new incentives should be developed to encourage the development of high quality plans and the timely implementation of key deliverables. Views are particularly welcome on these issues.

4.66 As part of the process for introducing the PC4 price controls, the Bureau made special allowances for Emiratisation costs for the period 2011 to 2013 as summarised in Table 4.3 below.

4.67 It would seem appropriate to develop a more targeted approach to cost recovery as part of the PC5 price control review.

Table 4.3: UAE National training and employment allowances for PC4

AED million, nominal prices	2011	2012	2013
AADC	30	40	60
ADDC	60	80	110
TRANSCO	20	30	40
ADSSC	6	9	12
Total	**126**	**169**	**242**

Incentives for efficient use of water and electricity

First consultation paper

4.68 The first consultation paper explained that it would be appropriate to consider how to improve the incentives on AADC and ADDC to encourage and promote end use efficiency, including the possibility of the price control providing funding for demand side management (DSM) initiatives.

Responses

4.69 AADC explained that there is scope to reduce future forecast increases in demand by the appropriate application of DSM initiatives. However, it also noted that at present there is a lack of clarity about responsibilities for DSM initiatives and that incentives are poorly focused and not strong enough.

4.70 ADDC also suggested that more clarity is required with respect to its role in encouraging and implementing DSM measures, tariff design and water management (including recycled water). Further, it suggested that separating distribution and supply would allow the supply business to improve performance and focus, and, that the regulatory arrangements for supply should properly incentivise ADDC to undertake DSM activities. ADDC also noted that it would need extra resources in order to carry out these activities.

4.71 In relation to the implementation of DSM initiatives, ADDC said that there would be advantages in targeting such measures on the usage of electricity in the summer and the use of potable water for agriculture and landscaping, as reducing these demands would allow the sector to make significant savings in its costs.

4.72 ADSSC noted that higher tariffs and incentives for efficiency could be effective for reducing demand, as per capita demand in the Emirate of Abu Dhabi is very high.

Assessment and way forward

4.73 The Bureau welcomes the comments made by licensees about the importance of DSM measures, the need to clarify the responsibilities of licensees in respect of these matters and advantages of strengthening incentives to encourage end-use efficiency.

4.74 As noted in the first consultation paper, the Bureau has already recognised the importance of DSM and created PowerWise and WaterWise Offices to help coordinate the delivery of these initiatives. The price control review now provides an opportunity to clarify the role of licensees in promoting DSM measures, where appropriate providing additional funding and to review and strengthen the existing incentives on AADC and ADDC.

4.75 There would be considerable advantages in the supply business / customer service functions of licensees taking on comprehensive new responsibilities for promoting DSM measures. The advantages stem from the core activities associated with promoting DSM, which relate to having high quality information about end use and the potential for savings, and, careful interaction with customers to encourage the adoption of suitable DSM techniques. The supply business / customer service activities of licensees would be best placed to undertake such activities given their existing customer focus. Nonetheless, both AADC and ADDC would need to develop persuasive strategies and business cases with respect to these matters, as part of the process for ensuring a successful transition to new responsibilities and to justify additional new funding from the price control arrangements.

4.76 As part of the process for developing these new strategies, it would be for licensees to bring forward pilot schemes for new DSM to PowerWise and WaterWise for discussion and approval. Once such strategies were developed, their approval by the Bureau could trigger the release of funding via a direction or price control derogation for these pilot schemes and other on-going costs associated with the promotion of DSM measures. Consideration would need to be given to the treatment of any distribution business capital expenditure, and whether this should be considered as part of or separate to the normal processes for the regulation of this spending. Further, in determining the initial allowances for operating costs of the supply businesses, a one-off allowance for the costs of developing these new energy efficiency strategies could be made.

4.77 It will also be appropriate to consider how to enhance the existing price control incentives for promoting end use efficiency. Both AADC and ADDC have noted that the revenue driver for the price control includes an incentive for them to sell extra units, while the Performance Incentive Scheme provides and incentive to reduce average sales to residential customers. There may be merit in reconsidering these mechanisms with the objective of providing more consistent and focused approach to incentives. These matters are discussed further in Section 3.

4.78 It is also for consideration whether the existing incentive to reduce average residential electricity and water consumption should be changed and made more focused. For instance, the highest residential usage on a household basis is by Nationals living in Villas. It would be possible to make these customers the focus of pilot schemes and initiatives for DSM measures, and, to focus the price control incentive on reducing the average usage of these households.

Incentive mechanisms and caps on financial impact

Four possible types of incentives and outputs

4.79 The above discussion reflects the Bureau's desire to replace the existing system of category A and category B incentives with a more comprehensive system of incentive regulation. Four possible types of incentives and outputs are emerging:

(a) formula based incentives for performance against metrics specified as part of this price control review

(b) incentives for the satisfactory completion of agreed initiatives or outputs

(c) further incentives that are identified at a high level but where the detailed specification or underlying data will require further development, and may be introduced during the period of the next price control, and

(d) pilot projects for end-use efficiency or DSM.

Formula based incentives for agreed metrics

4.80 Formula based incentives for performance measures agreed at this review include for example the incentives for system operator or availability, security and quality of supplies as discussed earlier in this section. These incentive arrangements could have the following characteristics.

(a) Formulas, targets and incentives would be incorporated into the licence and more detailed definitions and reporting arrangements to be set out in Regulatory Instructions and Guidance. These instructions and guidance would be issued by the Bureau, and any changes to them would be subject to a consultation process with licensees.

(b) The Bureau's initial thinking on the calibration of Incentive rates would be set out in the draft proposals document due to be published in March 2013.

(c) Current TA arrangements to continue or be enhanced.

Incentives for completion of agreed initiatives or outputs

4.81 Incentives for agreed initiatives or outputs at this review include for example strategies or plans or processes to be developed by the licensee in respect of asset management, Emiratisation and end-use efficiency. These incentive arrangements could have the following characteristics.

(a) The broad outline for the initiative or output would be established at this review.

(b) A process would be established at this review that will be used to assess the licensee's delivery of the initiative or output. The process would be used to score the licensees performance in delivering the initiative output on a scale of 0 to 5.

(c) This score would be used to calibrate a lump sum payment between zero and a pre-set maximum, which would typically be no more than 1% of MAR.

(d) The above outline and process would be reflected in the licence.

Incentives for metrics or initiatives to be agreed during PC5 period

4.82 Incentives to be agreed during the period of the new price control, for example specific metrics or initiatives relating to end use efficiency and/or Emiratisation, could have the following characteristics.

(a) The very broad outline for the metric or initiative would be established at this review

(b) Detail would be developed over time and set out in Regulatory Instructions and Guidance.

(c) Where formula based measures are agreed, the arrangements set out in paragraph 4.79 would apply.

(d) Where appropriate, the recovery of costs and incentive payments would be made by derogations from the price controls.

Incentives for pilot projects for end-use efficiency

4.83 Incentives for pilot projects for end-use efficiency or DSM could have the following characteristics.

(a) A process would be established to allow the Bureau to approve pilot projects in advance, including an estimate of the costs of implementing the projects and key milestones/deliverables. This process would also allow the Bureau to set an incentive payment for each project.

(b) Costs to be recovered via a pass through term in the licence, but subject to an audit showing actual costs had been incurred with a reasonable degree of efficiency (with further consideration given to the treatment of any distribution business capital expenditure as discussed above).

(c) Incentive payments to be made by price control derogation, but following evidence that the pilot project has been a success.

Caps on financial impact

4.84 As with the existing system of incentive arrangements, it will be appropriate to balance risks and rewards with a series of caps on the financial impact of the incentive arrangements. Such caps would prevent help ensure a balanced set of incentives and help protect the licensee from any undue business risk. Most incentives should have a cap so that its impact no more than between ½% and 1% of MAR. If an incentive is deemed particularly important a cap of 2% of MAR may be appropriate. These caps would relate to incentive payments – where there are arrangements to fund extra costs – for instance relating to Emiratisation or demand side measures then any such cost recovery would be in addition to the incentive payments. It is not clear that there is a case for an overall cap and the total level of incentive payments.

Key issues for consultation

4.85 The Bureau will seek to meet with the licensees to discuss the scope of various incentives and their detailed specification in the near future. The draft proposals will reflect these discussions as well as written responses to this consultation paper. Views are invited on any aspect of the issues raised in this section and in particular on the following.

Asset management

(a) Whether a broad approach to incentives for asset management, based around accreditation to appropriate asset management standards and further work to identify appropriate metrics and asset health indices is appropriate?

Availability, security and quality of supply

(b) Whether to broaden and develop the approach and scope of the incentives as discussed above (and in Annex 1) relating to the availability, security and quality of supply for each of (i) electricity transmission (ii) water transmission (iii) electricity distribution (iv) water distribution and (v) wastewater, is appropriate?

System operator incentives

(c) Whether the broad approach and scope of the system operator incentives summarised above and set out in more detail in Annex 2 is appropriate?

Quality of information

(d) Whether the focus of the information incentives should be (i) planning statements (ii) the existing arrangements applying to the AIS/PCRs/SBAs (iii) ADSSC's security standards report (iv) summer reliability assessment information and (v) leakage/losses reduction reports for water distribution?

How best to incentivise Emiratisation

(e) Is more sector wide coordination required in developing strategies for Emiratisation?

(f) How should any such strategies be assessed and by whom?

(g) Are new price control incentives needed to encourage the development of high quality plans and the timely implementation of key deliverables relating to Emiratisation?

(h) Whether the costs of Emiratisation should be allowed by identifying in advance the expected additional costs of Nationals in each grade or job type and using this on an annual basis to provide for the costs of additional National staff?

How best to incentivise end use efficiency

(i) Whether AADC and ADDC should be required to develop strategies and business cases with respect to promoting DSM measures?

(j) What should be the scope and broad content of these strategies and how should they be addressed?

(k) How should the costs of developing any such strategies be allowed for in the price control?

(l) Whether the existing DSM incentive on average residential per household should be made more focused and whether it should apply to average residential use by Nationals in villas?

Incentive mechanisms and caps on financial impact

(m) Are the suggestions for incentive mechanisms and caps on financial impact discussed in paragraphs 4.79 to 4.84 appropriate?

5. Operating expenditure

Introduction

5.1 The first consultation paper highlighted the importance of making appropriate allowances for operating costs, that these allowances are one of the main inputs to the price control calculations, that efficient spending on operating costs is critical to overall network performance, and, that it is important to take account of the interactions between operating and capital costs. It noted that the price control allowances for opex should provide sufficient revenue for a company to finance its business and operate effectively and efficiently.

5.2 In addition to above, the first consultation paper summarised the trends in opex of the four network companies in the recent years. While costs have increased rapidly, this is not necessarily an indication of inefficiency – as the total level of costs is influenced by a wide range of factors including significant demand growth, labour market conditions, Emiratisation, related party recharges and other accounting policies. Key observations made in the paper are summarised below.

(a) Over the period 2006-2010, companies' actual opex generally doubled in nominal terms and increased on average at a rate (14%-28% per annum) in excess of the rate of general inflation in the UAE (about 6% p.a.) indicating over-spending against the price control allowances by around 8%-37%.

(b) Staff costs constitute the largest or major part (33% to 65%) of companies' opex and increased on average by 24% p.a. in nominal terms over 2006-2010.

(c) For both AADC and ADDC combined, the ratio of supply business costs to distribution business costs increased from 18% in 1999 to 85% in 2010.

(d) Costs in real terms on a per customer or a per unit distributed or transmitted or treated increased much more slowly or decreased.

5.3 As noted in Section 1, the Bureau has appointed consultants (Deloitte) to assist with the review of operating costs. The consultants are undertaking this work in three broad phases:

(a) an assessment of the reasons for increase in opex of AADC and ADDC over the period 2006 to 2010

(b) the development of robust regulatory accounting arrangements for the five price-controlled companies, and

(c) the preparation of forecasts of reasonable opex for four network companies for the period 2014 to 2018.

5.4 The following paragraphs summarise Deloitte's work to date on the first two phases. The third phase is discussed later in this Section.

Past opex performance and regulatory accounting arrangements

Consultant's assessment of reasons for opex increases in recent years

5.5 The first phase of Deloitte's work was an assessment of the reasons for the increases in opex of AADC and ADDC over the period 2006 to 2010. This phase has already concluded with Deloitte's final report issued in August 2012 to the Bureau and the two companies. This identified several main factors for the increases in opex:

(a) general inflation contributed about 28% and 24% of the opex increases for AADC and ADDC, respectively

(b) increases in total compensation (salary and allowances) accounted for 48% and 30% of opex increases for AADC and ADDC, respectively

(c) increases in the ratio of number of UAE nationals to expat employees from 26% to 35% for AADC and 20% to 29% for ADDC contributed 3% and 13% of the opex increases, respectively

(d) increases in related party charges contributed 9% and 7% of the opex increases for AADC and ADDC respectively, and

(e) additional employees and other factors accounted for remaining 12% and 27% of opex increases for the AADC and ADDC respectively.

5.6 While comparing the distribution companies' opex performance against the price control assumptions, Deloitte found that both the companies were not able to make reductions compared to their price control allowances during the period due to increases in staff costs and related party charges. The report also identified a number of key factors contributing to the significant increase in supply opex relative to distribution opex. These included: the misallocation of significant costs to supply following transfer of employees from operation and maintenance divisions to customer services, and, the capitalisation of costs for staff working on distribution projects.

5.7 The Deloitte's reports are helpful in explaining the main reasons why the operating costs of AADC and ADDC have increased over the period 2006 to 2010. Nonetheless, during the phase 1 work the licensees were not able to provide evidence showing that the level of cost increases were consistent with efficient operations.

Development of robust regulatory accounting arrangements

5.8 Deloitte commenced the second phase of their work in April 2012 to review the existing SBA arrangements and develop proposals for a robust set of regulatory accounting arrangements to be applied in the future covering AADC, ADDC, TRANSCO, ADSSC and ADWEC. The purpose of this work is to increase the transparency and reliability of the information in the SBAs, including that relating to operating costs. The scope of this work is summarised below.

(a) Critically assess the accounting policies, standards, procedures and processes that AADC, ADDC, ADSSC, ADWEC and TRANSCO follow in relation to the preparation of the SBAs with a view to develop a new approach to regulatory accounting arrangements that is robust and fit for purpose.

(b) Develop appropriate draft regulatory accounting guidelines (RAGs) and SBA templates for each of the five price-controlled licensees (AADC, ADDC, ADSSC, ADWEC and TRANSCO) which should cover: all the key accounting issues with the intention of increasing the transparency and making reasonable distinctions between operating and capital costs (and if appropriate making further distinctions between categories of costs consistent with international best practice); providing appropriate guidance with respect to any cost allocations, attributions and recharges (including from the ADWEA group); allowing consistent reporting of costs over time that will be reasonably robust to explain changes in licensee's structures; and, illuminating and policing the separation of distribution, supply and unlicensed activities.

(c) Strengthen the reconciliations to statutory accounts and price controls with a clear and transparent explanation of any differences between the statutory accounts and the SBAs.

(d) Develop the templates for the SBA's to take into account the requirements of the price control reporting arrangements, which should allow the streamlining of PCRs. The templates should also promote transparent comparisons between the assumptions made in setting price controls and out turn costs. Further, develop specifications for a robust commentary / detailed narrative encompassing both financial and operating analyses, and, that provides a clear description and assessment of any changes in structures, policies or accounting practices that may have an impact on the information contained in the SBAs.

(e) Discuss and recommend the role of licensees' external auditors in auditing and checking the SBAs, the scope and nature of their audit and the extent to which any duty of care can be relied on by the Bureau. Develop recommendations for making the audit arrangements of the SBAs more robust.

(f) Ensure that recommendations reflect international best practice, particularly from countries such as the UK and Australia where similar regulatory regimes for utilities exist.

5.9 Deloitte issued an inception/initial report for this phase to the Bureau and the companies in July 2012 for their review and comments. The inception report outlines the key accounting issues, inconsistencies between the separate business accounts and other regulatory submissions, and differences in application of accounting policies and basis of allocation of revenues and expenses across the sector companies. It also summarises international best practices for preparation and presentation of separate business accounts. The inception report then provides an initial comparison of regulatory reporting practices of the five sector companies against the best practices particularly in relation to disclosures on allocation methodologies and related party transactions, and, reconciliations against statutory accounts and PCRs.

5.10 The final report is expected in February 2013 which will contain a set of robust regulatory accounting arrangements comprising of regulatory accounting guidelines (RAGs) and a standard format for the separate business accounts. Nonetheless, it will not be until 2015 that the Bureau starts to receive financial and accounting information (i.e. 2014 SBAs) that is fully consistent with these new arrangements.

Approach to operating cost projections and allowances

First consultation paper

5.11 The first consultation paper summarised the approach that the Bureau has used to set the opex allowances at the previous price control reviews (which involved determining an appropriate allowance for opex in a year and then rolling this forward with adjustments to take account of demand growth and efficiency).

5.12 It went on to explain that phase three of Deloitte's work will involve reviewing and critiquing the operating costs forecasts of the four network companies, and, developing opex forecasts for 2014 to 2018 based on an assessment of costs in a base year and a high level productivity review of each licensee's activities (taking into account any Bureau's guidance issued in respect of factors such as Emiratisation costs). This is scheduled to be carried out between October 2012 and July 2013.

5.13 The first consultation paper sought views on possible improvements from the approach adopted by the Bureau for PC4 opex projections, the interactions between opex and capex, key drivers of future operating costs, Emiratisation policy and related costs, and, the consultants' work programme on opex. It also asked how best to enhance the incentives on companies to manage their operating costs more efficiently, and, whether there are other changes which should be considered to the regulation of opex.

Responses

5.14 Network licensees generally responded positively to the above issues and made a number of suggestions.

(a) AADC suggested using 2008 and 2009 as base years for the analysis of future operating costs. It said that opex forecasts should also take particular account of staff costs, network growth and modernisation and any change in distribution-supply regime. It also said that opex increases due to capex on expansion projects and opex decreases due to replacement capex should be properly taken into account.

(b) ADDC noted that under CPI-X regulation the opex levels during the period of the price control should be the most efficient achievable and the Bureau should take this into account in its overall approach to setting opex allowances for the next price control period.

(c) ADDC criticised the Bureau's previous approach to opex projections as too mechanistic and was also doubtful about any consultant's ability to develop opex projections up to 2018 - in view of various uncertainties and challenges including adoption of mega developments and the accuracy of business plans.. It suggested annual reviews or adjustments of opex to address these challenges, and, that the Bureau should be more involved in ADDC's annual business planning process to help improve understanding across other Government stakeholders and encourage efficiency.

(d) ADDC also suggested that asset size (i.e. length and number) and quality are key drivers of opex – but that better information on these matters would be required in order to analyse costs at an activity level and improve efficiency. Better financial management would also allow the costs of new activities to be identified and if appropriate a logging-up system introduced to allow the regulatory funding of new initiatives. ADDC said that a whole life costing approach to assets would be the most effective way to address the trade-off between opex and capex.

(e) ADSSC welcomed and supported phase three of Deloitte's work and stressed the need for it to be given sufficient time to respond to information requests. It suggested a pass-through treatment for its network operation and maintenance contract costs (as these were subject to a full competitive tendering process) and that other opex should be aligned with its forecasts and annual budget setting process. ADSSC also highlighted the need to address the opex impact of mega developments, and, the importance of quality and security standards in driving costs. It argued that previous assumptions of 0.75% opex increase for each 1% demand increase does not reflect the sector's experience.

(f) ADSSC noted that it had already participated in international benchmarking of its asset management activities and that it had engaged in market testing of key collection and treatment activities to obtain the lowest possible costs. Nonetheless, it would work with the Bureau to try and find ways of further improving incentives for efficiency.

(g) TRANSCO noted that during PC3 and PC4 periods it had operated broadly in line with the Bureau's operating cost allowances. It said that if incentives for efficiency were to be retained in the future then opex targets needed to be realistic and consideration should be given to logging up changes in operating costs caused by unexpected events.

(h) It highlighted the advantages of benchmarking costs but also noted the difficulties in making such comparisons. In the light of these factors, TRANSCO suggested close engagement with the Bureau and its expert consultants in order to promote meaningful opex projections. It stressed that it would be important to distinguish between controllable and non-controllable costs and to provide incentives for company to manage controllable costs efficiently. While recognising the trade-off between opex and capex, it said that any approach focusing on total expenditure is too complex and suggested maintaining the separate treatment of opex and capex in the price control calculations.

(i) TRANSCO listed a large number of drivers for various operating costs (based around assets, business activity, demands and manpower levels) and suggested the use of regression analysis or a composite variable for opex might provide a useful basis for forecasting future levels of opex. An alternative to these forecasts would be annual opex reporting with the logging-up and down of over and under spends, subject to a cap and collar arrangement. It supported the need for Deloitte's phase three work, but raised concerns about transparency and the lack of a formal business plan questionnaire.

(j) All licensees noted the importance of staff costs and in particular the importance of either making appropriate allowances for the costs of employing and training UAE nationals, and/or finding an appropriate mechanism to deal with changes in these costs.

Assessment and way forward

5.15 The Bureau welcomes licensees' broad support for Deloitte's work and will continue to work towards addressing suggestions and concerns about this work stream. We also accept the points made by TRANSCO that it is more pragmatic to retain a separate treatment of opex and capex for PC5, but take account of any important interactions between these cost categories (such as capitalisation policy and the impact of asset condition on opex).

5.16 The AIS has been used at previous price control reviews as the primary vehicle for licensees to provide detailed projections of costs, cost drivers and outputs. In addition licensees responded to consultation papers and provided other information to Bureau during the price control review. In practice, this approach allows licensees to provide very similar information to a formal business plan questionnaire and so the Bureau intends to retain these arrangements (together with the option of making additional requests for information as the price control review progresses) for the PC5 review.

5.17 As noted in Section 2, the Bureau does not regard suggestions that it should be involved in annual reviews of operating expenditure as practicable. There may be some merit in logging-up or down variances in specific costs such as those associated with developing UAE Nationals, but there are also disadvantages in the bureaucracy and incentives created by such mechanisms.

5.18 As discussed in Section 6, if suitable remedial measures are taken on mega developments (which may well require additional capital expenditure by licensees, with an appropriate downward adjustment to the transfer price payment by the relevant network company to the developer) and given that these are new assets, it is not clear that mega developments should require any significant additional opex over and above that would be allowed for general growth and increase in network size. If licensees have different views in relation to these matters, they will need to make a case to Deloitte for additional opex.

5.19 A number of other comments made by companies will also be for Deloitte to consider in phase three of its work on projections of operating costs. These include:

(a) the suggestion by AADC that 2008 and 2009 should be used as the base years for the future projections of operating costs

(b) the underlying costs drivers for opex – including measures of the size and condition of asset bases, staffing costs, activity levels, overall demand, supply/distribution arrangements, and security/quality standards

(c) the treatment of ADSSC's network operation and maintenance contract costs, and, other costs that have been subject to competitive tendering

(d) whether some costs should be considered controllable and others non-controllable

(e) whether some costs should be subject to a logging up or other similar process, and

(f) arguments made by ADDC that the current costs should be considered as efficient as the licensees have been operating under a CPI-X price control regime.

5.20 The Bureau will seek to work closely with Deloitte in developing projections of operating costs and will offer specific guidance in a number of key areas, such as the separation of supply and distribution activities.

5.21 It is important that licensees prepare compelling evidence in support of claims that they make, including that existing cost levels are efficient, costs have been properly benchmarked, costs have been market tested, particular cost drivers have a significant impact on opex, and, certain costs are fixed and others variable. This evidence needs not only to relate to a narrow process, such as competitive tendering, but to clearly demonstrate that a need case has been properly considered, that a benchmarking or tendering is appropriate and that the overall result is efficient. If such evidence is not provided then licensees can expect less weight to be given to their arguments about what constitutes efficient costs.

Key issues for consultation

5.22 We welcome views on any aspect of the issues raised in this Section and in particular on the following.

(a) Consistent with the views expressed in Section 2, the initial conclusion that it is not practicable for the Bureau to approve operating costs on an annual basis, although it may be appropriate to treat certain elements of costs differently in comparison with existing price controls.

(b) Any further suggestions that licensees have for how Deloitte should approach making projections of operating costs.

(c) Compelling evidence from licensees supporting claims that costs are efficient, have been appropriately benchmarked, competitively tendered and so on.

6. Capital expenditure

Introduction

6.1 Capital expenditure (capex) is important for network companies. It allows for the timely meeting of demand for new connections and supplies and the replacement or betterment of existing network infrastructure. Overall it has a significant impact on the security and reliability of supplies provided by electricity, water and wastewater networks. The way that capex is planned and subsequent works are procured provides significant opportunities to improve sector efficiency. In the price controls, capital expenditure is financed through depreciation allowances and returns on regulatory asset values (RAVs), with the Bureau's estimates of efficient capital expenditure being added to the RAVs over time.

6.2 The treatment of capex by the Bureau in previous price control reviews has essentially been based on an ex-post assessment of efficient capex – that is, allowed capex has been determined after the event (based on efficiency criteria established by the Bureau). Pending the ex-post assessment, provisional allowances for future capex are incorporated into the price controls to facilitate the financing of capex and the smoothing of the price control revenue from one period to another. Necessary financial adjustments are then made at the subsequent price control review to compensate a company for the difference between the provisional capex allowance and the actual efficient capex (taking account of financing costs).

6.3 In contrast to more mature jurisdictions such as the UK where such approach to capex regulation has been used, it has produced relatively low efficiency scores in the Emirate of Abu Dhabi and consequently relatively large downward adjustments to the capital allowed into the regulatory asset values (RAVs) and so price control revenue. For instance, the efficiency scores that were applied to capex spent in PC1 and PC2 periods were around 90% on average – resulting in disallowing about 10% of companies' capex spends.

6.4 PC1 and PC2 capex has been dealt with at previous price control reviews. This Section deals with the PC3 (2006 to 2009) and PC4 (2010 to 2013) capex efficiency reviews and how PC5 (2014 and onwards) capex should be treated at this review. The following considerations are relevant to these work streams.

(a) In the PC3 and PC4 price control proposal documents, the Bureau made a number of commitments to the treatment of PC3 and PC4 capex (incurred during the period 2006 to 2013), including assessing capital expenditure on the basis of already established efficiency criteria and the use of a relative efficiency approach with adjustments for movements in the efficiency frontier. The Bureau's consultants have already produced efficiency scores for PC3 capex. With the support of licensees, the Bureau has brought forward and is now undertaking the review of PC4 capital efficiency, with the intention of making the efficiency assessment more timely.

(b) Nonetheless, in their responses to the first consultation paper, licensees expressed significant reservations about our approach to the regulation of capital expenditure and capital efficiency. ADDC suggested the Bureau should take a more active role in relation to capital expenditure and should quickly move away from the current system to an approach that rewards improvements as they happen. ADSSC stressed the importance of moving from an ex post assessment of capital efficiency to an ex ante approach – with the Bureau approving forward plans for capital expenditure. TRANSCO suggested that the ex-post assessment of capital efficiency by the Bureau is perhaps the biggest risk faced by licensees and that key aspects of the capital efficiency assessment should be undertaken on an ex ante basis as part of an expanded process for approving its Seven Year Statement.

(c) It will be important to consider what further steps can be taken to make the regulation of capex more timely and forward looking – including the use of more detailed provisional allowances for future capex, ex-ante reviews of future capex plans or elements of these plans (such as an annual assessment of the need case and key aspects of the design process for large projects), and, more focused, frequent and timely ex-post assessments.

(d) Recent capex reviews indicate significant room for improvements in the licensees' capex processes. These improvements can be driven by stronger incentives and the Bureau's closer engagement in certain aspects of a licensees' network planning and investment decisions. Such arrangements would need to be accompanied by clear criteria for assessment and Bureau's engagement in licensees' processes should be pragmatic in terms of resource requirements and keeping the responsibilities and incentives for the companies to manage their affairs efficiently.

Treatment of PC3 capex

First consultation paper

6.5 The first consultation paper summarised the arrangements for PC3 capex previously agreed for the four network companies – with consultants calculating efficiency scores and, for water and electricity network companies, a relative efficiency approach and further adjustments to reflect movement in the capex efficiency frontier of the whole sector. The following two tables reproduce the actual and provisional PC3 capex for the network in 2010 prices from the first consultation paper.

Table 6.1: PC3 provisional capex allowances (2010 prices)

AED million, 2010 prices		2006	2007	2008	2009	Total
AADC	Electricity	422	422	422	422	1,689
	Water	212	212	212	212	847
ADDC	Electricity	742	742	742	742	2,968
	Water	436	436	436	436	1,744
TRANSCO	Electricity	1,661	1,661	1,661	1,661	6,646
	Water	1,038	1,038	1,038	1,038	4,153
ADSSC	Total	746	607	882	1,323	3,558
Total		**5,258**	**5,119**	**5,394**	**5,835**	**21,606**

Table 6.2: PC3 actual capex (2010 prices)

AED million, 2010 prices		2006	2007	2008	2009	Total
AADC	Electricity	699	512	907	1,352	3,470
	Water	108	111	-4	265	479
ADDC	Electricity	684	1,258	1,588	2,719	6,249
	Water	307	353	600	455	1,715
TRANSCO	Electricity	1,906	3,564	5,270	2,769	13,509
	Water	794	912	2,550	2,456	6,713
ADSSC	Total	734	349	842	1,837	3,762
Total		**5,233**	**7,060**	**11,752**	**11,852**	**35,897**

6.6 The Bureau appointed KEMA and WS Atkins in March 2011 as the independent consultants to undertake the efficiency review of PC3 capex for the electricity and water/wastewater businesses, respectively. They assessed both the capex processes and 20 sample projects for each business and employed two approaches to assessing the capex efficiency – a scoring method (i.e. scoring the efficiency of business processes on a scale of 0-4 or 0-5) and a monetary quantification method (i.e., quantifying the difference between actual and efficient costs). The consultants issued final reports in June 2012.

6.7 The first consultation paper sought views on how the efficiency scores should be translated into an overall efficiency score and what further adjustments should be made to take account of the relative position of licensees and the overall efficiency frontier. It also asked whether ADSSC should be treated differently.

Responses

6.8 We have received mixed views from the licensees on the above issues.

(a) AADC said that there should be a higher weight for the quantification method scores compared to the process efficiency scores in the price control calculations. Nonetheless, it noted that process score could be used to improve company performance.

(b) ADDC said that it would be important for the Bureau to settle the treatment of PC3 capital efficiency (and issues relating to mega projects) to reduce uncertainty, and, it stressed the importance of a relative efficiency approach as set out in the PC3 and PC4 price control review consultation documents. It suggested that the process scoring method is an easier method to understand, aligning with industry guidelines and is useful in improving the business performance, but that in theory the monetary quantification method more readily applies to making efficiency adjustments to RAVs. In making such adjustments, ADDC also suggested that the scores should be adjusted for certain factors, such as factors outside its control and mistakes/errors made by the consultants, and, that there was an element of subjectivity in the assessments made by the Bureau’s consultants. It set out in some detail issues where it considered the consultants had reached an erroneous or misguided view. ADDC went on to indicate that such subjectivity and errors in assessment suggested that all projects should be assessed by the consultants rather than a sample of projects (or certain outliers should be removed from the sample), and, that these matters offered further support to its views that there should be an annual assessment of capital efficiency by the Bureau.

(c) ADSSC said that the monetary quantification method was too subjective and it had a preference for the process based scoring method. It also stressed that the assessment should be more transparent and definition of the frontier company should be improved to take proper account of specific market conditions and constraints / government requirements (including relating to procurement) in the Emirate of Abu Dhabi. ADSSC suggested that it should be treated differently than other network companies, since it is a newly formed company and that it should not be penalized for investment decisions made before it was formed.

(d) TRANSCO supported the process scoring method over the quantification method, noting that the quantification method is overly subjective and not sufficiently transparent, whereas the scoring method is more transparent but remains only of limited value. It suggested applying a weighted average score of the two methods to the price control calculations. TRANSCO also suggested removing the inefficiencies caused by the Abu Dhabi factors and its shareholder, assuming that both factors are out of TRANSCO's control. It did not support the use of relative efficiency scores or any adjustment for the movement of the efficiency frontier, given the maturity of the capital efficiency process and other issues around the assessment.

Assessment and way forward

6.9 There are advantages in the process scoring approach – in that it more directly relates to areas of potential business improvement and is the focus of the consultants work for the PC4 efficiency review. The unadjusted process scores were between 83% and 86% for electricity and 68% and 74% for water businesses.

6.10 It is however important that any approach is reasonable and does not unduly penalise licensees. In contrast to electricity, the process efficiency scores for water were significantly below the monetary quantification scores. Increasing the water scores to take account of this, gives a range for water scores of 84% to 87%. ADSSC's scores are not significantly different under either of the two methods.

6.11 Given the Bureau's previous commitments to relatively efficiency and frontier movement then in the absence of compelling evidence to the contrary, adjustments should be considered in determining the final approach to the PC3 capital efficiency. A relative efficiency approach is designed to ensure those companies with the best scores benefit relative to less efficient companies and the movement in the efficiency frontier is designed to ensure that the sector as a whole is not unduly penalised or rewarded for inefficiency. The consultants also produced adjustments to take account of local conditions, resulting in adjusted efficiency scores ranging from 83% to 89% for electricity and 87% to 89% for water (after taking account of the difference between the scores from two methods discussed above). These adjusted scores would reflect the considerations underlying an approach based on relative efficiency and an appropriate movement in the efficiency frontier.

6.12 ADSSC is a special case as it is the only wastewater company and has been created relatively recently. Its adjusted process efficiency score is 65%, to a large extent reflecting a number of difficult projects inherited from other organisations when it was created in 2005. Adjusting its efficiency score for half of these factors gives a score of 83%.

Table 6.3: PC3 capex efficiency assessments

Adjusted efficiency	Electricity	Water / Wastewater
AADC	88.80%	89.34%
ADDC	83.17%	86.72%
TRANSCO	88.60%	88.32%
ADSSC		82.78%

Treatment of PC4 capex

First consultation paper

6.13 The first consultation paper summarised the arrangements agreed at the last price control review for the treatment of PC4 capex – which are similar to that for PC3 capex. The following two tables compare the actual PC4 capex to date (totalling around AED 21 billion over 2010-2011 in 2010 prices) against the provisional PC4 capex allowances (of about AED 56 billion in total, in 2010 prices).

Table 6.4: PC4 provisional capex allowances (2010 prices)

AED million, 2010 prices		2010	2011	Total 2010-2011	2012	2013	Total 2010-2013
AADC	Electricity	900	900	1,800	900	900	3,600
	Water	130	130	260	130	130	520
ADDC	Electricity	1,570	1,570	3,140	1,570	1,570	6,280
	Water	590	590	1,180	590	590	2,360
TRANSCO	Electricity	5,230	5,230	10,460	5,230	5,230	20,920
	Water	2,530	2,530	5,060	2,530	2,530	10,120
ADSSC	Total	3,000	3,000	6,000	3,000	3,000	12,000
Total		**13,950**	**13,950**	**27,900**	**13,950**	**13,950**	**55,800**

Table 6.5: PC4 actual capex to date (2010 prices)

AED million, 2010 prices		2010	2011	Total 2010-2011
AADC	Electricity	1,246	548	1,794
	Water	425	137	563
ADDC	Electricity	2,039	2,553	4,592
	Water	827	552	1,379
TRANSCO	Electricity	2,372	3,238	5,610
	Water	1,532	1,723	3,255
ADSSC	Total	1,446	2,520	3,966
Total		**9,888**	**11,273**	**21,161**

Notes: Bureau is currently reviewing these capex figures since the audited SBAs of ADDC seem to show that the advances to contractors used in driving these figures include payments to developers of mega projects for networks to be or being transferred to ADDC. These figures may therefore need adjustment.

6.14 The PC4 capex review has now been brought forward in response to the companies' suggestion for a more timely review. The review has been structured such that 2010-2012 capex will be reviewed in 2012/2013 with the efficiency adjustments to RAVs made at this review and 2013 capex will be reviewed in future alongside PC5 capex.

6.15 KEMA and Atkins are currently undertaking this work, which will focus on using the process scoring method to calculate efficiency scores, as this provides most information to licensees on areas of potential business improvement. As noted in the first consultation paper, the Bureau has adopted a separate process for valuing network assets that are built by developers as part of their mega developments (to be transferred to licensees for ownership, operation and maintenance).

Responses

6.16 Generally the licensees responded positively to the first consultation paper on the issues relating to PC4 capex review and made suggestions for further changes and improvements.

(a) AADC supported the timing and use of the same consultants and the same high level approach for the PC4 capex review as were employed for the PC3 capex review, and, the plans for the separate treatment of mega developments. It noted that the assessment of PC4 capex should focus more on real efficiency improvements and less on generic processes.

(b) ADDC noted that in the PC4 capital efficiency review the Bureau was attempting to identify the reasons behind efficiency shortfalls, but said that there was scope for further improvement because of inconsistencies in the approaches adopted by the Bureau's consultants. Consistent with its views on PC3 capex, it suggested considering both the monetary quantification and the process scoring approaches, with the use of the monetary quantification method to adjust RAVs. It also noted the advantages of the early resolution of issues relating to mega projects.

(c) ADSSC referred to its previous comments on how to improve the PC4 capital efficiency review and summarised areas for improvement as follows:

(i) the consultants should use a single process based method

(ii) the consultants should provide a detailed description of the efficiency frontier and each main process

(iii) there should be an agreed scoring mechanism, and

(iv) the consultants should provide supporting evidence and justification for any findings of inefficiency.

(d) TRANSCO reiterated its comments previously made on the PC4 capex review. These included: concerns about the appointment of two consultants without a lead party, uncertainty in respect of treatment of Abu Dhabi / ADWEA factors, the inappropriateness of the relative efficiency approach, the need for appropriate engagement with the licensees and workshops, clarification of areas of improvement identified in PC3 for PC4, the need for PC4 to contain recommendations for actions with timetables, the need for further work on areas of disagreement between licensees and consultants/Bureau, and, the need to further harmonise the consultants scoring criteria.

Assessment and way forward

6.17 The Bureau broadly supports the comments and approach suggested by AADC and ADSSC – but it is important to note that because of reasons of practicality, the consultants' efficiency reviews are relatively high level and so the level of detail they can sensibly provide needs to be at a commensurate level of detail. To the extent that it is practical, the Bureau has also tried to address TRANSCO's concerns – but in some areas such as the appointment of a lead consultant, the Bureau has decided that this would not be the best way forward. We will continue to work with the licensees and our consultants to ensure the successful and timely delivery of the PC4 capital efficiency assessments.

6.18 Given the similar circumstances of the PC3 and PC4 reviews, the Bureau's initial view is that a similar approach should be taken to translating PC4 efficiency scores into RAV adjustments as the approach used for PC3 efficiency scores (and discussed above).

6.19 In relation to the separate work stream on the mega developments, the Bureau's consultants will be advising on both the transfer price mechanism (to be paid by the relevant network company to the concerned developer) as well as recommending an approach to setting the efficient value of the assets to be used in calculating RAVs. The transfer price may be reduced to reflect any material inefficiencies caused by developers (or any additional costs associated with remedial work to bring assets up to an acceptable specification and imposed on the network companies). For the avoidance of doubt, the efficient values of assets determined as above would be added into the RAVs without any further review. To the extent available in a timely manner, these efficient values would be added to RAVs at this review. Otherwise, this will be done at the next review or any interim review through appropriate adjustment taking account of the financial costs.

Treatment of PC5 capex

First consultation paper

6.20 The first consultation paper highlighted the steps taken to make the capex review more timely and the work that will be undertaken by the external consultants to make more robust allowances for future capex. It considered whether there are further steps that could be taken to make the capex regulation more effective, further improve incentives for capital efficiency and reduce the risks of downward adjustments to RAVs on licensees and their shareholders.

Responses

6.21 In response to the first consultation paper, AADC supported the consultants' work on PC4 capex review and PC5 forecast capex, and the interim review of capex in the middle of the PC5 period. It also suggested a special provision for unforeseen changes or work requirements which are not included in companies' capex forecast but companies are subsequently required to undertake.

6.22 ADDC favoured a more forward looking process to capex regulation with the Bureau's engagement in the capex planning on an annual basis. In its view, consultants should be involved on a longer term basis and the regulatory capex forecasts be aligned with its business plans.

6.23 ADSSC said that the sector should put more emphasis on planning with all stakeholders agreeing a single forward looking business plan. It also said very few consultants could estimate the costs of capital projects accurately. It suggested that the sector should move to an ex ante approach to capex regulation as soon as practical. If the above ex ante approach were not to be practicable for PC5, ADSSC supported an interim review in the middle of PC5 period.

6.24 TRANSCO emphasised its preference for annual capex assessments and a more forward looking approach to capital efficiency based around:

(a) an increased supervisory role for the Bureau with an expanded approval process for its planning statement encompassing key elements of capital expenditure

(b) annual capital efficiency assessments of its business processes undertaken by the TA, and

(c) partial forward looking assessments of capital efficiency by the Bureau of most likely projects, up to a financial value of AED 3 billion per annum.

6.25 TRANSCO went on to say that if the above suggestions were adopted then the need for interim reviews would be diminished, but that TRANSCO would support such a review if it leads to more timely reviews of efficient capital expenditure.

Assessment and way forward

6.26 We note the companies' general preferences for a more forward looking approach to capex regulation, alignment of regulatory capex forecasts with their business plans and Bureau's closer involvement in capex planning. As set out below, we have taken account of these suggestions to the extent they seem reasonable, however, full annual capital efficiency reviews would not be practicable. Therefore, the proposals below would limit the scope of but do not abandon ex-post reviews of capital efficiency.

6.27 The three main changes in the Bureau's proposed approach to the regulation of capital efficiency are summarised below.

(a) KEMA and Atkins have already been appointed to review the companies' forecasts of PC5 capex (2014-2018), the basis of these forecasts, major capital projects and recent trends. We hope that the companies will provide inputs into this work stream via 2012 AIS or by providing business plans to the same timetable. This should support the Bureau's objective to set more robust provisional capex allowances for PC5 and satisfy companies' desire for better alignment with their business plans.

(b) In the future years of PC5 we intend to work with the companies to review elements of their capex plans on an annual basis. This will have two main benefits. First, it will improve the robustness of the companies' capex budgets and associated requests for Government funding. Second, it will reduce the scope of ex post regulation by dealing with issues around assessment of project need, optioneering and design, and, project costing on a forward looking basis. This in turn will limit the scope of ex-post assessment to those capex processes not reviewed ex ante, such as procurement and project implementation.

(c) To date, we have reviewed the capital efficiency for the past years towards the end of the price control period. We will now be undertaking such a review on a more frequent basis – every 2 or 3 years. This more timely review will help the sector to learn from the review and incorporate identified improvements in the capex processes. Accordingly, an ex-post efficiency review of capex spent in 2013-2014 (along with the last year of PC4 period, i.e., 2012) could be undertaken during 2015 and review of capex spent in 2015-2017 during 2018. In relation to the above ex post capital efficiency review for PC5 capex, we will seek to appoint consultants to undertake such review using the process scoring method.

Key issues for consultation

6.28 We would welcome views on any of the issues raised in this Section and in particular on the following.

(a) Whether the PC3 capital efficiency scores assessed by the consultants using the process scoring method should be adopted with the following adjustments.

(i) In case of water businesses, an upward adjustment for the difference between scores under process scoring and monetary quantification methods.

(ii) For electricity, water and wastewater businesses, an upward adjustment to take account of local conditions.

(iii) For wastewater business, an upward adjustment to take account of issues peculiar to the sewerage company in the sector.

(b) The initial conclusion that to facilitate consistent treatment, whatever method that is to be used for PC3 capex should also be applied to the PC4 capex.

(c) Changes to the future regulation of capex, including:

(i) more robust provisional allowances for PC5 capex, supported by the work of consultants, and

(ii) annual ex ante review of key elements of companies' future capex plans, focusing on the assessment of need and project optioneering / design.

(d) an interim ex post capex review in the middle of PC5 period.

7. Financial issues

Introduction

7.1 This Section discusses how operating and capital expenditures should be financed (including the calculation of allowances for regulatory depreciation and returns) and how the overall level of price control revenue should be calculated at this review.

7.2 The calculations of price control revenue will involve using allowances for operating costs, regulatory depreciation and returns (sometimes called building blocks), together with present value calculations, to derive core price control revenues. These calculations will be set out in the Bureau's draft and final proposal documents. The final proposals document will use these core price control revenues to determine base values for the new price controls, which will be included in new price control conditions in the licences for the four network companies. Once the new price control arrangements are put in place, this level of base revenue will be subject to incentive arrangements and cost pass-through terms (as discussed in Sections 3 and 4), allowing the determination of total price control revenue.

7.3 AADC and TRANSCO did not comment on the financial issues section of the first consultation paper, with TRANSCO noting that ADWEA would be in a better position to comment on these issues. ADDC also noted that issues around the cost of capital were largely matters for ADWEA.

Regulatory asset values and regulatory depreciation

First consultation paper

7.4 The first consultation paper stated the Bureau's intention to use an approach consistent with that adopted during previous price control reviews to calculate the RAVs for the next price control period. This would involve making calculations for each year since the start of the PC3 period in 2006 so that the previous provisional estimates of capex and depreciation allowances are aligned with the efficient capex for the PC3 period, and, to the extent practicable, PC4 period. For the PC5 period, it would be necessary to make projections of capex, RAVs and regulatory depreciation.

7.5 It asked for the views on the best approach to financing capital expenditure and whether the approach used for calculating RAVs and regulatory depreciation at the PC4 review remains reasonable.

Responses

7.6 In its response to the first consultation paper, ADDC suggested more timely adjustments to the RAVs for distribution businesses and further discussion on the approach for supply businesses. Based on its proposal for separation of distribution and supply businesses, it suggested the use of other form of profit calculation for supply to reflect its different risk profile and small asset base.

7.7 ADSSC noted that it was relatively comfortable with the calculation of regulatory depreciation, and stressed again its concerns about the misalignment of the price control calculations and arrangements for Government funding. It also said that it expected Deloitte's work on regulatory accounting guidelines (RAGs) to include approaches to calculating depreciation and RAVs.

Assessment and way forward

7.8 ADDC's suggestion on separation of supply and distribution businesses and profit calculation for supply business are discussed in detail in Section 3. In our view, either building-block approach using return on RAV or a profit margin on turnover could work for price control calculations for the supply businesses. Nonetheless, any significant increases in profits for supply activities would need to be properly justified in terms of underlying business risk.

7.9 The Bureau is taking steps to make its reviews of capital efficiency more timely and forward looking, which should mean that RAVs reflect estimates of reasonably efficient capital spending in a more timely way.

7.10 As noted in Section 2, the Bureau will seek to discuss its approach to setting price controls and the interactions with subsidy with the Department of Finance. With regards to ADSSC's comments, we note that Deloitte's work on RAGs should help increase transparency and consistency between the SBAs and price control calculations, but it will not determine the approaches to calculating regulatory depreciation and RAV. These matters will be addressed as part of this review.

7.11 Pending a final decision on the separation of supply businesses, we are content with the straight-line method and asset life assumptions as set out in the first consultation paper for calculation of regulatory depreciation. We are also content with the approach summarised in the first consultation paper for updating the RAVs for PC3 and PC4 efficient capex and PC5 provisional capex. The draft proposals will summarise these calculations and the Bureau will provide licensees with a spread sheet model showing the detail of these calculations.

7.12 When updating the RAVs, it will be necessary to make an adjustment for financing costs of the differences between the efficient and provisional estimates of capex for each year of the PC3 and PC4 periods, until the start of the new price controls in 2014. These calculations will also be set out in the draft proposals. In order to allow timely recovery and to reduce complexity, our current thinking is to allow recovery of such costs over the PC5 control period (as an adjustment to the calculation of price control revenue) in line with the approach employed at the PC4 review for such costs in relation to PC2 capex.

Cost of capital

First consultation paper

7.13 The first consultation paper explained the Bureau's approach to date to the calculation of the cost of capital as the forward-looking, real Weighted Average Cost of Capital (WACC), with the cost of equity calculated by applying the Capital Asset Pricing Model

(CAPM). In view of the limited size and liquidity of debt and equity markets in the Emirate of Abu Dhabi, the Bureau's previous estimates of the cost of capital have drawn heavily on the estimates of cost of capital components used by regulators of similar businesses in the UK and Australia. The Bureau used a real cost of capital of 5% and 4.5% for setting the PC3 and PC4.

7.14 The paper asked for views on the whether the Bureau should continue to estimate the cost of capital on the basis of a real cost of capital using the Capital Asset Pricing Model (CAPM) based on both overseas and local capital market data.

Responses

7.15 ADSSC's response to the first consultation paper stated that the Government's interest free funding with repayment over 10 years results in a lower cost of capital for the company than the local and international markets. It highlighted the need to consider the financial issues in a wider context to align the current regulatory and Government control frameworks. ADSSC also noted that the CAPM is an established and recognised method for estimating the cost of capital, but that local data should be used to calibrate these calculations.

Assessment and way forward

7.16 Local capital markets remain subject to various limitations, which mean that it may not be practicable to base estimates of the cost of capital solely or mainly on local evidence. Nonetheless, we continue to investigate the information that is available on these matters. This is consistent with the approach adopted by telecommunication regulatory authorities in Bahrain and Oman, which have supported their cost of capital calculations with the data from overseas developed markets and cross-checked them against local or regional estimates to the extent they are available.

7.17 We also intend to discuss the approach to setting the cost of capital with the Department of Finance.

7.18 Set out below is an assessment of the recent overseas precedents. As compared to our previous estimates, these overseas proposals indicate a decrease in the risk free rate but increases in debt premium and equity risk premium and hence an overall increase in both the costs of debt and equity. This declining trend for risk free rate is supported by the recent yields to maturity on 5 to 10 year US treasury bonds in the range of 0.7%-1.7% as compared to the range of 2%-3% at the time of previous price control review. Similarly, the Emirates Inter-Bank Offered Rate (EIBOR), which is used by the banks in the UAE as the benchmark rate for lending, has also continued to decline from around 3% at the previous review to currently around 2%. The increases in debt premium and equity market risk premium appear to reflect changes following the recent and on-going global financial crisis. Bearing the above in mind, there seems to be a case for making a somewhat higher allowance for debt financing. In relation to debt financing, it is also appropriate to take account of emerging trends in Sector financing, with the greater use of bank or commercial debt and less reliance on interest free loans from the Government. It will be important that allowances for debt costs reflect the likely cash costs of meeting these interest payments.

7.19 The following table below summarises relevant parameters and estimates from recent regulatory decisions or proposals in the UK, Northern Island and Australia.

Table 7.1: Recent overseas regulatory proposals on cost of capital parameters (real terms)

	Ofcom March 2010	QCA June 2010	Ofcom January 2011	UR-NI April 2011	Ofgem May 2011	ESCOSA Feb 2012	IPART June 2012
Risk-free rate (real)	1.95%*	2.68%*	1.50%	2.00%	2.00%	1.51%*	0.78%*
Debt premium	1.50%	4.68%	2.00%-2.50%	1.50%*	3.00%	3.94%	3.30%-4.80%
Equity Risk Premium	5.00%	6.00%	5.00%	6.75%	5.00%	6.00%	5.50%-6.50%
Equity Beta	0.85	0.65	0.68 -1.18	0.88	1.00	0.80	0.60-0.80
Gearing	30.00%	50.00%	50.00%	55.00%	40.00%	60.00%	60.00%
Real cost of capital calculations for overseas regulatory proposals							
Cost of debt (real)	3.45%	7.36%	3.50%-4.00%	3.50%	5.00%	5.45%	4.08%-5.58%
Cost of equity (real)	6.20%	6.58%	4.90%-7.40%	7.94%	7.00%	6.31%	4.08%-5.98%
Cost of capital (real)	**5.38%**	**6.97%**	**4.20%-5.70%**	**5.50%**	**6.20%**	**5.79%**	**4.80%-5.74%**

Source: Various overseas regulatory proposals or decisions as listed below:
(1) Ofcom: "Assessment of Sky's profitability and cost of capital: Annex 3 to PV TV Statement", 31 March 2010;
(2) Queensland Competition Authority (QCA): "Gladstone Area Water Board: Investigation of Pricing Practices – Final Report" June 2010;
(3) Ofcom: "Proposals for WBA Charge Control: consultation document and draft notification of decisions on charge control in WBA Market 1", 20 January 2011;
(4) Utility Regulator Northern Ireland: "SONI Price Control 2010-2015 - Decision Paper" April 2011;
(5) Ofgem: "Decision on the cost of capital to be used in the reasonable profit test where applicable to Independent Gas Transporter (IGTs) and updated guidance on the test", Ofgem's letter to IGTs and others, 24 May 2011;
(6) Essential Services Commission of South Australia (ESCOSA): "Advice on a regulatory rate of return for SA Water - Final Advice", February 2012; and
(7) IPART: "Review of prices for Sydney Water Corporation's water, sewerage, stormwater drainage and other services: Water-Final Report", June 2012.

Notes: * indicates a parameter calculated by the Bureau using the information available in the relevant regulator's publication – for example, the real risk-free rate calculated from nominal risk-free rate and inflation estimate using the relationship: Real rate = [(1+Nominal rate) / (1+ Inflation)] -1.

7.20 The following table presents our initial cost of capital calculations for PC5 based on the above parameters but excluding certain outliers. This indicates a range of 3.8% to 7.3% with a mid-point average of 5.5% for the overall cost of capital.

Table 7.2: Bureau's initial cost of capital calculations for PC5 (real terms)

	Low	High	Mid-Point Average
Risk-free rate (real)	1.50%	2.00%	1.75%
Debt premium	1.50%	3.94%	2.72%
Cost of debt (real)	3.00%	5.94%	4.47%
Equity Risk Premium	5.00%	6.75%	5.88%
Equity Beta	0.68	1.00	0.84
Cost of equity (real)	4.90%	8.75%	6.69%
Gearing	60.00%	50.00%	55.00%
Cost of capital (real)	**3.76%**	**7.35%**	**5.47%**

Cross-check against recent regional estimates

7.21 The following table summarises recent cost of capital estimates made by local and regional capital market analysts for the regionally listed electricity and water sector companies and for the locally listed companies (in real estate, energy and telecommunication sectors).

Table 7.3: Recent regional capital market estimates of cost of capital (nominal terms)

	Analyst	Company	Sector	Date	Risk free rate	Cost of equity	Cost of debt	WACC
1.	NBK Capital	QEWC	Electricity & Water	June 2010		8.7%	6.5%	
2.	GIH	QEWC	Electricity & Water	August 2010	4.6%	10.6%	7.0%	8.1%
3.	Rasmala	QEWC	Electricity & Water	Oct 2010	5.0%	12.0%	5.0%	7.5%
4.	Taib	SEC	Electricity	2011	3.16%	8.12%		6.04%
	Regional Range				**3.16%-5.0%**	**8.12%-12.0%**	**5%-7.0%**	**6.04%-8.1%**
5.	Shuaa Capital	Dana Gas	Energy	Jan 2011		12.5%	7.0%	10.7%
6.	Rasmala	Du	Telecom	Nov 2010	4.5%	10.5%	6.5%	10%
7.	GIH	DSI	Construction	July 2101	5.8%	12.3%	7.0%	10.7%
8.	GIH	Emaar	Real estate	June 2011	4.2%	15.7%	8%	11.8%
9.	GIH	Aldar	Real estate	June 2011	4.3%	17.7%	8%	11.9%
10.	GIH	Sorouh	Real estate	June 2011	4.2%	12.1%	7%	13.6%
	Local Range				**4.2%-5.8%**	**10.5%-17.7%**	**6.5%-8%**	**10%-13.6%**

Source: Various research reports by the analyst firms listed above.
Notes: GIH = Global Investment House; QEWC = Qatar Electricity and Water Company; SEC = Saudi Electricity Company; DSI = Drake & Scull International

7.22 These estimates have been prepared on a nominal basis and the underlying assumptions with respect to inflation are not clear. To compare with the Bureau's initial estimate of the cost of capital (which is in real terms), it is necessary to make an assumption about inflation. Using an estimate of inflation of 4%[1] and the Bureau's estimate 5.5% for the WACC gives a nominal rate of return of 9.7% (1.04*1.055=1.0972). This is broadly in the middle of the 6% to 13.6% range that can be derived from the above table. However, if we apply this inflation assumption of 4% to convert nominal local market estimates, for example nominal risk free rates, we face a potential problem of some exceptionally low or even negative risk free rates. It may be that these local/regional estimates are based on a lower estimate of inflation, perhaps in the range of 2% to 3%. This would mean the Bureau's estimate for the WACC was in the bottom half of the above range, which appears reasonable as the top end of the range relates mainly to real estate companies, which would be expected to have relatively high risks and so a relatively high cost of capital.

7.23 It is also useful to consider a recent consultation paper issued by Oman's Telecommunications Regulatory Authority (TRA) in October 2011, although telecom operators may have a somewhat different risk profile compared to monopoly water, wastewater and electricity utilities. The following table compares the Oman's telecom regulator's estimates of cost of capital parameters (converted into real terms) against the Bureau's initial estimates for PC5 (in real terms):

[1] Business Monitor International's UAE Business Forecast Report Q4 2012, 6 July 2012 forecasting UAE CPI inflation in the range of 4%-5% for 2014-2021.

Table 7.4: Oman TRA's estimates of cost of capital (real terms)

	Oman TRA's estimates for Omantel (Integrated)		Oman TRA's estimates for Nawras (Integrated)		Bureau's initial estimates for PC5	
	Low	High	Low	High	Low	High
Risk-free rate (real)*	0.72%	1.34%	0.72%	1.34%	1.50%	2.00%
Debt premium	1.33%	1.57%	1.33%	1.57%	1.50%	3.94%
Cost of debt (real)	2.05%	2.91%	2.05%	2.91%	3.00%	5.94%
Equity Risk Premium	6.28%	6.28%	6.28%	6.28%	5.00%	6.75%
Equity Beta	0.77	0.82	1.06	1.31	0.68	1.00
Cost of equity (real)	5.55%	6.49%	7.38%	9.57%	4.90%	8.75%
Gearing	0.00%	0.00%	5.30%	5.30%	60.00%	50.00%
Cost of capital (real)	**5.55%**	**6.49%**	**7.09%**	**9.21%**	**3.76%**	**7.35%**

Source: "Determining the WACC for Omani telecommunication operators", Consultation Paper, Oman Telecommunications Regulatory Authority, 22 October 2011
Notes: * Oman TRA's nominal figures for risk-free rate have been converted into real terms, based on forward looking average inflation rate assumption of 3.00% as per the source document, using the relationship: Real rate = [(1+Nominal rate) / (1+ Inflation)] -1.

7.24 The parameters in the above table are broadly consistent with the Bureau's estimates, but with the Bureau assuming somewhat higher debt costs and much high gearing. Energy and water utility companies are generally able to support significant levels of gearing and so the above comparisons do not undermine the Bureau's estimate of a 3.8% to 7.3% WACC, with a midpoint of 5.5%.

7.25 Bearing all of the above in mind, both overseas and local/regional evidence indicates that a range for the real cost of capital of 3.8% to 7.3% (with a mid-point average of 5.5%) is reasonable for PC5.

Calculating core price control revenue

First consultation paper

7.26 The first consultation paper explained the net present value (NPV) approach used by the Bureau in previous price control reviews to sculpt the revenue requirements over the period of the price control. The core revenue requirement (i.e. revenue requirement excluding the pass-through costs) for each year of the control period is calculated using a building block approach by adding annual allowances for operating cost, regulatory depreciation and returns. Additional adjustments may be made for one-off considerations. All the calculations are carried out in real terms (i.e. at constant prices) and NPVs are calculated using the estimated cost of capital discussed above as the discount rate.

7.27 The paper sought views on the appropriateness of the above approach to core revenue calculation and whether further financial adjustments and issues should be considered in such calculations.

Responses

7.28 ADDC's indicated that more annual adjustments to price control revenue would be appropriate and that it would be necessary to take account of mega developments and TRIP projects (public housing estates managed by the Municipality).

7.29 ADSSC, while satisfied with the required revenue calculation, expressed concerns about the misalignment between Government and regulatory frameworks. It also noted the need for price control revenue to take account of the costs of sub-standard assets on mega developments, tariff implementation, increasing regulation and compliance, and, higher authorities' instructions for actions outside the planning arrangements.

Assessment and way forward

7.30 ADDC's suggestion regarding annual adjustments to price control revenue and ADSSC's concerns about misalignment between regulatory and funding/budgeting frameworks are discussed in Sections 2 and 3. Issues relating to mega developments are discussed in Section 6. On TRIP projects, ADDC needs to explain and articulate more clearly its concerns so that the Bureau can properly assess any possible impact on the price controls.

7.31 On additional or one-off costs, ADSSC needs to make its case and quantify any additional operating costs and these will then be considered by Deloitte's in their assessment of PC5 operating cost projections. In relation to sub-standard assets associated with mega developments, these matters will be dealt by the Bureau's work strand on mega developments (as explained in Section 6).

7.32 In the light of the above, with issues highlighted by licensees most appropriately dealt with in the assessment of capital and operating costs, the Bureau intends to adopt an approach to calculating and sculpting price control revenue consistent with that used in PC4.

Key issues for consultation

7.33 We will welcome views on any aspect of the issues raised in this Section 7 and in particular the following initial conclusions.

(a) The approach used at PC4 to calculate regulatory depreciation and RAVs remains appropriate at this review.

(b) To allow the timely recovery of the foregone financing costs of the difference between efficient and provisional estimates of PC3 and PC4 capex, these financing costs should be remunerated as an adjustment to revenue over the PC5 period rather than as an addition to the RAVs (for recovery over 30 years or more).

(c) A range for the real cost of capital of 3.8% to 7.3% with a mid-point average of 5.5% would be appropriate for PC5.

(d) The approach to calculating and sculpting price control revenue used in PC4 remains appropriate at this review.

Annex 1: Incentives for availability, security and quality of supply

To be issued separately to the network companies

Annex 2: Transmission system operator incentives

To be issued separately to the network companies

Annex 3: Incentives for provision for high quality information

To be issued separately to the network companies