

# Submission to the Essential Services Commission

## Re: Electricity Distribution Price Review 2006 – 2010 Draft Decision

### Revenue Requirement - Metering

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### Executive Summary

The Essential Services Commission (Commission) is required to determine revenue requirements for prescribed metering services including meter provision and meter data services for those metering installations for which the Distributor is exclusively responsible.

United Energy Distribution's (UED) total Price Service submission for metering and metering services amounted to \$136.6m for metering capital expenditure and \$60.5m for operation and maintenance expenditure. The Commission, in the Draft Decision, has seen fit to significantly reduce UED's revenue requirements to \$66.7M. for capital and \$40.9m for operating expenditure

UED has proposed meter volumes for new, fault and replacement installations and the Commission's mandated Interval Meter Rollout (IMRO) program in this submission. Meter volumes were based on the Commission's IMRO decision and UED's anticipated requirements arising from UED's meter test program. The Commission saw fit to reduce UED's replacement meters in 2008 by some 40,000 and averaged the remaining requirement over 2008-09 questioning both the requirement for the number of meters to be replaced and the ability of UED to undertake the work. The Commission offers no substantial support for its position. UED has, and continues to argue that the meter replacement volumes are based on an actual meter test program developed under AS 1248 part 13, and reflects the network's actual meter asset characteristics.

UED believes that it has an obligation to replace meters as and when they are identified as non-complying and based on the expected outcomes of the meter test program is proposing to retain the necessary resources to meet the expected workload. Further, UED's believes that the experience it obtained in undertaking a 38,000 meter rollout program provided sound planning and project management skills to support its ability to undertake the work. Unless the Commission proposes an exemption for non-compliance, based on the information available UED considers that the Commission must fund the volume of meters as proposed in the replacement metering program.

UED's submitted meter purchase and installation costs were based on existing contract arrangements and the experience derived from its 2003 meter rollout project. Since the Draft Decision, UED has updated its pricing to reflect latest contract and market arrangements. As discussed with the Commission and its consultants in a number of workshops since the Draft Decision, UED and other distributors believe that the benchmark meter provision and installation costs used by the Commission in the Draft Decision fail to adequately allow for a number of items including disposal costs, adequate travel times and some meter tender specification requirements. In this submission, UED presents arguments in support of its revised forecast revenue requirements for meter purchase, installation and handling and disposal.

In the area of meter data services, UED's initial Price Service Offering (PSO) provided for the replacement of IT systems. This program is required to replace existing systems which have reached the end of their useful life, and to support meter data management requirements arising from the mandated IMRO program. UED acknowledges that aspects of the IT replacement program will need to be recovered under distribution pricing. However,



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UED believes that any split between distribution and metering pricing needs to be based on an analysis of the total project scope and costs to ensure all requirements are met. UED is concerned that the Commission's approach of engaging separate and independent consultants to consider Information Technology (IT) costs may lead to some needs not being adequately addressed. In this submission, UED has provided additional information to support IT expenditure requirements.

UED raised in the PSO a number of risks associated with the IMRO project. UED considers that the mandated nature of the IMRO project increases the level of risk to the business and that the Commission must recognise this increased level of risk in reaching a decision on program costs. UED supports an increased rate of return as an appropriate way of addressing this higher risk level.



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### 1 Introduction

As part of the 2006 Electricity Distribution Price Review the Essential Services Commission (Commission) is required to determine revenue requirements for prescribed metering services. The Commission engaged Energy Consulting Group (ECG) to assist in this task.

Prescribed metering services include meter provision and meter data services for those metering installations for which the Distributor is exclusively responsible. United Energy Distribution (UED) has exclusive responsibility for the provision of metering services to:

- “first tier customers who consume less than 160MWh per annum and do not have an interval meter that is remotely read; and
- subject to the National Electricity Code or Rules (as appropriate), second tier customers with a metering installation type 5, 6 or 7, but excluding those with an interval meter that is remotely read.”<sup>1</sup>

UED has considered the ECG report and the Commission's Draft Decision and provides the following comment in response to the approach taken and assumptions made in determining the revenue requirement for prescribed metering services.

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<sup>1</sup> Essential Service Commission Draft Decision, June 2005, page 413.



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### 2 UED Price Service Offering

UED's PSO in respect of metering and metering services was made in the context that there would be no material change to timing and general approach to the rollout process as proposed in the July 2004 Final Determination.

The Commission's templates for metering and metering services were completed based on current contract arrangements for the supply of metering and metering services and on experience and data obtained from the rollout of 38,000 replacement meters in 2003.

The Interval Meter Rollout program (IMRO) has significant IT implications, particularly with respect to the volumes of data required to be managed and transferred. Current UED systems are not capable of supporting the significant transaction and data volume increases. UED proposed to replace the existing systems with an integrated vendor provided solution as well as system integration and the implementation of the enterprise version of a meter reading system. This was proposed as UED considers that the implications of the IMRO program on UED's applications architecture requires enhancements to all systems supporting the meter to cash process not just meter data management. As industry solutions offer this within a Customer Information System (CIS) and meter data capture system, a replacement of the existing CIS and associated in-house systems is required. UED also considered this option to be the least risk, least cost solution.

UED's total Price Service submission amounted to \$136.6m for metering capital expenditure and \$60.5m for operation and maintenance expenditure.

As part of the PSO, UED proposed meter volumes for new, fault and replacement installations and the IMRO program. Rollout volumes were based on the Commission's decision and averaged over the period of the rollout. Volumes for replacement meters were based on the anticipated outcomes of UED's meter test program. This approach resulted in a material spike in meter volumes for 2008. UED's total meter volume for new, fault and replacement meters amounted to 264,500, with 130,500 meters in 2008.



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### 3 Commission’s Draft Decision

The Commission’s Draft Decision is based on consideration of ECG’s report on Distributor submissions. In the Draft Decision the Commission has:

- Treated the installation costs of new meters separately, with costs to be recovered through an excluded service charge;
- Allowed for the costs of replacement meters to be recovered through a prescribed charge under the metering price control;
- Reduced the 2008 replacement meter volumes proposed by UED by 42,142 and averaged the remaining volume over 2008-09;
- Applied ECG derived benchmarks for meter supply, installation and difficult sites costs;
- Applied ECG derived benchmarks for a generic metering data system to arrive at UED’s capital requirements;
- Applied ECG derived benchmarks for project management and training capital expenditure; and
- Applied ECG derived benchmarks for a generic metering data system to arrive at UED’s maintenance cost requirements for IT related metering data services.

The Commission’s Draft Decision provides \$66.7m for metering capital expenditure (UED submission \$136.6m) and \$40.9m for operation and maintenance expenditure (UED submission \$60.5m).

## 4 UED’s Response to the Draft Decision

### 4.1 Meters

#### 4.1.1 Meter Volumes

The Commission has reduced the volume of meters proposed by UED for replacement in 2008 as a result of non-compliance from 84,283 units by 42,142 units and has spread installation of the remaining units over 2008 and 2009.

#### 4.1.2 Volumes of Units to be Replaced

UED’s meter testing program, which aligns with AS 1248 Part 13 in accordance with the Metrology Procedure Clause 2.4.3, has been used as the basis for estimating the number of meters that might require replacement as a result of periodic family testing. UED commenced this testing program in 2002, hence it is not surprising that there is a substantial number of families due for testing in the next pricing period, with the consequent potential for high volumes for meter failures.

The forecast total number of meters that might fail in any one year is impacted by the number of individual meter families (which must be by manufacturers and by design or pattern or type), the number of meters installed within each family and failure rates from testing. UED has not assumed a 100 percent failure rate of all meter families, but rather has based its estimate on past experience and believes that estimate is appropriate. Whilst UED could have grouped meters into wider age bands with some cost savings in sample testing, this would lose the advantage of data trending for asset management purposes.

The Commission has accepted a proposal by ECG that UED’s replacement volume in 2008 be reduced by 50%. This arbitrary reduction is not linked to any analysis of UED’s testing program or statistical or technical analysis of individual meter families within that program. Families within the program include meters in excess of 40 years old with old ball and jewel type technology, which is no longer used, and other components subject to wear.

Further, on page 16, ECG argues:

“Given that the State Electricity Commission of Victoria (SECV) installed a significant proportion of these meters, ECG believes that replacements due to faults should be fairly consistent across all Distributors.”

ECG’s argument ignores the age of meters, as a significant proportion of UED’s meters (and to a lesser extent some parts of other DBs) were installed in the early growth corridors of suburban Melbourne. Further, as with Citipower and AGL, a significant proportion of the meters were not installed and maintained by the SECV at any time except for the 12 months immediately prior to privatisation, but rather by independently owned and operated electricity undertakings.

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### 4.1.3 Physical Installation

The Commission states that in its opinion “even after this reduction, it is not practicable for UED to install such a large volume of meters in one year relative to the other years” (page 428). UED disputes this assumption.

UED believes that without evidence to the contrary, it has a regulatory obligation to take all steps necessary to prepare to handle the volume of work as predicted by the meter testing program in the most efficient and cost effective means. It continues to assess all available options however, at this time, considers a major replacement program in 2008 the most likely requirement.

To execute such a high volume program UED believes extensive programming covering both physical works and customer management, together with quality, skilled resourcing are key requirements. UED’s approach would include segmenting meter installations by type to maximize any efficiency that might be achieved in rolling out high volume, small single-phase type installations, while applying skilled resources and extensive customer planning to the more difficult, multi-phase installations. Previous experience has shown the need for good planning and customer liaison to manage access issues to both business and domestic customers as well as the second wave of revisits arising from the more difficult installation and access issues.

As a majority of the targeted meters were installed as new in the growth corridors, UED expects that efficiencies can now be gained in programming a replacement program by allowing for “up and down the street replacement” thus maximising resources while minimising travel costs, revisits to areas and customer confusion.

UED has handled large replacement programs in the past as demonstrated by the 38,000 units replaced in 2003 over approximately a 4-month period. UED believes there is sufficient lead-time to enable the establishment of the necessary programs and resources to handle the volumes estimated in 2008 and beyond, and is currently in discussions with service providers with this objective.

### 4.1.4 Impact of the Commission’s Decision

The Commission’s Draft Decision on meter volumes impacts UED in a number of ways:

- It exposes UED to non-compliance with regulatory obligations under a number of instruments (eg Utility Meters Metrological Controls Act 2002, Clause 11);
- In order to manage that regulatory risk, UED will be required to put in place measures which are likely to incur costs which it may not be able to recover.
- While UED acknowledges the Commission’s position that the M-factor will enable UED to recover costs for higher than forecast volumes, there is a material cashflow impact for UED and note the M-factor will also apply in reverse should the meters not be installed.
- Rebalancing constraints limit a DB’s ability to adjust tariff charges. The Commission needs to put in place a mechanism which allows for the adjustment of these rebalancing constraints where the recovery of costs arising from technology developments or changing contestability levels are impacted by these constraints.



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UED notes from discussions that the Commission is not providing an automatic 'no action' letter for proposing that non-compliant meters may stay in the field for an additional 2-3 years. The Commission is also not indemnifying UED against any claims made by the untimely meter replacement.

UED proposes that the Commission amend its decision on volumes and timing to those proposed in UED's initial PSO.

### 4.2 Meter Costs

The Commission's Draft Decision on the cost of supply of meters is set out in Table 13.8, page 431. The costs shown are based on an average cost determined by ECG from information provided by suppliers and include an allowance for inventory and other handling costs. No detail of the specification used, or commitment by suppliers to actually meet the budgetary figures has been provided to UED.

#### 4.2.1 Meter Purchase Costs

The initial costs provided by UED were based on existing contracts and meter specifications. UED has undertaken a new tender process to determine current market prices for meters to its current specifications.

UED believes that the current breakdown of metering categories contained in the templates is insufficient to reflect the real price of different meters within a category. Therefore, in determining the amended pricing provided to the Commission, UED has considered a number of meter type sub-categories, and the volumes relating to each, to arrive at the average cost included in the templates. These sub types include meters allowing two way flow for embedded generation or 2 registers for embedded generator sites and 30Amp or 50Amp contactors for internal time switches for the management of off peak loads etc. These represent requirements in the field which need to be included into the average pricing methodology.

#### Meter Transformer Charges

Initially UED included metering transformers in the cost of Low Voltage Current Transfer (LVCT) installations. In accordance with Commission's e-mail advice of 3 August 2005, the cost of metering transformers has now been removed from the installation cost for LVCT installations. UED's proposed scale and treatment of these charges is set out in the table below.

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**Table 4.1 - Table of Metering Transformer Charges**

	LVCT	HVMT
Supply Transformers (excluded service charge at supply)	\$599.25	Variable
Maintenance >160 (excluded service charge per NMI per year)	\$46.43	Variable
Maintenance <160 (prescribed service charge per NMI per year)	\$46.43	Variable

The charge for the supply of transformers to LVCT customers will apply to new and replacement equipment from the 1 January 2006.

UED currently supplies all LVCT equipment in its Distribution area. High Voltage Metering Transformer (HVMT) installations are specific to customer requirements and hence there are large variances in design and cost of equipment and installation. Generally customers supply HVMT equipment. There are relatively few existing or new installations and a customer specific charge is thus considered appropriate.

Maintenance of HVMT is carried out on a 10 year cycle. As the costs are dependant on the design and accessibility of the installation for testing, a variable charge for maintenance is considered appropriate. The maintenance charges for LVCT equipment would be levied against all customers where UED is the Responsible Person from 1 January 2006.

### **Meter Purchase Costs**

The table below sets out UED's Meter Purchase cost based on current tender prices delivered into store together with an allowance of 7.5% for inventory and disposal costs and exchange rate variations.

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**Table 4.2 – Meter Purchase Cost**

Meters	Original Submission	Draft Decision <sup>(1)</sup>	Current Position
New Connections			
Basic Accumulative Meter		35.00	35.00
Single phase single element	144.00	70.00	97.00
Single phase two element	172.00	155.00	164.00
Three phase DC	361.00	295.00	318.00
Three phase CT	437.00	355.00	415.00
IMRO Program			
Basic Accumulative Meter		N/A	N/A
Single phase single element	102.00	70.00	97.00
Single phase two element	198.00	155.00	164.00
Three phase DC	402.00 - 498.00	295.00	318.00
Three phase CT	498.00	355.00	415.00
Fault Replacement			
Basic Accumulative Meter		35.00	35.00
Single phase single element	144.00	70.00	97.00
Single phase two element	172.00	155.00	164.00
Three phase DC	361.00	295.00	318.00
Three phase CT	437.00	355.00	415.00

On page 430 of the Draft Decision the Commission flags the possibility that it may use the cost of a single element interval meter with contactor in the Final Determination rather than a two element interval meter with contactor if there is a material difference in costs. UED strongly object to this for customers with existing peak and separately measured off-peak tariffs unless the ESC at the same time mandates a tariff change which allows the installation of a single element interval meter with contactor.

### 4.2.2 Inventory and the Disposal Costs

At a workshop with Commission and ECG on 11 July 2005, DB's raised the issue of stores disposal which has not been included in the Draft Decision. Disposal costs include:

- the stores management of meter returns,
- recording and physical disposal of returned meters and ancillary equipment,

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- meter sorting and inventory management, and
- disposal of the asset from the asset register.

These costs are exclusive of the ‘back office’ costs associated with a meter exchange and other standing data updates to Market Settlement and Transfer Solution (MSATS) and customer information systems, accounting costs associated with asset registers and the requirements on UED as Meter Provider to maintain a Meter Register and accurate standing data.

In determining an appropriate percentage to cover such costs UED notes that:

- more meters and ancillary equipment will be returned than the number of replacements installed (2 meters and a time switch replaced by one meter, etc); and
- given the larger number of units involved and the increasing environmental awareness surrounding the disposal of materials.

Disposal and Inventory costs can be expected to increase and are included in the 7.5% allowance provided earlier.

### 4.3 Installation Costs

The Commission’s decision on installation costs covering basic installation and complex sites is set out in Tables 13.9 (page 432) and 13.11 (page 436).

UED’s initial submission was based on current contract arrangements and experience gained in the 38,000 meter replacement project (this was a more straight forward basic meter to basic meter exchange). Installation costs for all meter installations were based on using a single man crew (unless height or difficult work is involved). Having considered the Draft Decision and ECG’s report, UED offers the following comments for consideration.

#### 4.3.1 Labour Rates

ECG in footnote 33, page 25 of its report suggests a labour rate of \$60 per hour with an allowance of 10% for travel and direct supervision. Based on current contract arrangements UED believes a rate of \$80 per hour, including allowances for vehicle, supervision, etc to be more appropriate. This is consistent with current rates.

#### 4.3.2 Installation and Travel Times

UED’s basic ‘on-site’ installation time for replacement interval meters consists of the following elements:

- Pre- assessment
  - Confirm address
  - Access – Keys etc
  - GSL’s – Appointment etc



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- Advise Customer
- Job Safety Assessment
  - Condition of equipment
  - Customer wiring
  - Service fuse
  - Asbestos
  - Illegal interference
- Record existing equipment details and final read
- Disconnect
- Perform meter exchange
  - Incorporating load control requirements
- Reconnect
- Perform tests (OCEI and OH&S requirements)
  - Neutral & Supply Testing (NST)
  - Polarity
  - Phase sequence
  - Meter Rotation
- Record installation details
- Clean site
- Inform customer

To this process the following additional timings must be added:

**Time to travel between sites** – UED estimates that 10 minutes per installation needs to be allowed to cover the time taken to record site information, identify and establish a presence at the next site and travel between sites. While initially sites are likely to be in the same general location, it is unlikely that sites will be immediately adjacent.

**Travel to site** – UED believes that an allowance of 50 minutes (or 11.1% of a 7.5 hour nominal day) needs to be allocated across installations. This allowance is based on 30 minutes in the morning for work allocation, loading stores, fueling and maintaining vehicles, traveling to the first site, etc. A similar allowance needs to be allowed for return travel, off loading vehicles and installation records, etc. (50 = 30 out + 30 in – 10 in-between). UED has based its estimate of the 30 minutes on average response times to faults within its area (23 minutes over the past 3.5 years) and made an allowance for the additional tasks of work allocation, stores loading, truck maintenance, etc).

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### 4.3.3 Complex Sites

#### (a) Meter Board

For sites where it is necessary to replace the meter board, UED estimates that on average an additional 15 minutes per site would be required together with the cost of a replacement meter board at an average cost of \$35 per board. While UED proposes that installation crews will carry standard meter boards/panels to minimise the need for re-visits, it will be impossible to cater for the large variety of meter boards/panels that will be encountered. UED estimates that in 75% of cases, the initial crew attending the changeover will not be able to complete the task and a second visit will be required. In such instances the initial crew would be required to detail work requirements during the first visit. 5% of all sites associated with the interval meter program are likely to require a meter board replacement.

#### (b) Rewiring

For sites requiring rewiring between the switchboard and the meter board (eg issues relating to wire condition and termination condition etc), UED believes that a licenced contractor would be required. UED estimates that for such sites an incremental cost based on 4 manhours of Registered Electrical Contractor (REC) time will be required. 1% of sites are expected to require rewiring. Wiring issues between the fuse service point and the meter board are assumed to be the customer's responsibility and repairs would be at the customer's expense.

#### (c) Asbestos

For sites containing asbestos, based on quotations received, UED estimates that specialist contractor costs will be \$649 to remove and dispose of the asbestos. Further incremental costs above the basic or simple meter exchange for all such sites will include a new meter board (\$35), meter board replacement time of 15 minutes and a second visit to site for fixing the meter. 5% of sites are expected to contain asbestos.

While it has been suggested that some sites containing asbestos may be left, regulations require that once suspected, sites must be tested, etc. UED believes it would be more efficient to replace suspected sites rather than undertaking a 'test and see program'.

Further, at all sites that contain asbestos it will be necessary to install a new meter board on a second visit following the asbestos removal contractors and the marginal cost increase associated with this task needs to be included.

### Second visits

In addition to the second visits identified above, based on experience in the 38,000 meter replacement project where some 6.6% of sites required two or more visits, UED believes that an allowance of 5% for missed appointments, access difficulties, etc needs to be allowed. UED has estimated the second visit time at 20 minutes based on 10 minutes on site for the initial visit and 10 minutes to travel to the next site.



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### **4.3.4 Disconnection/Reconnection Issues**

In its initial submission, UED made an allowance for sites where disconnection and reconnection issues based on the level of problems experienced in the meter replacement program (around 5% of sites had a problem). Such connection issues, while some may eventuate into service faults, normally lay dormant unless disturbed by some external action.

Typical disconnection/reconnection issues would include connection box, fuse and service issues, physical failures and customer installation issues such as obstructions, bargeboard rot and general access. In some instances, such as a bargeboard failure, individual customers will experience additional costs and possible extended supply outages due to the need for repairs which they will be required to arrange and complete before the meter installation and reconnection can be completed. UED is surprised that the Commission is accepting of the level of customer outrage that is likely to result as opposed to socialising these costs in the meter roll out.

UED believes that as in the meter replacement project, the Interval Meter Roll Out (IMRO) will lead to a material number of connection issues. If an allowance for addressing these problems is not to be included in the IMRO, UED would seek to include an additional amount in the EDPR to be recovered through the Distribution Use of System (DUoS) charge. The average cost per site to carry out this work was obtained via a quote from a contractor and is \$747.

### **4.3.5 Early Installation of Interval Meters**

In UED's initial submission a recovery cost associated with a customer/retailer request for installing meters ahead of our proposed timelines was not included. UED will submit an excluded service charge in accordance with the ESC Guideline No. 14.



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### 4.3.6 Summary of Meter Installation Costs

Table 4.3 below compares UED’s unit metering installations costs with the Draft Decision.

**Table 4.3 – Meter Installation Costs**

Meters	Draft Decision		Current Position
	With meter	Without meter	
New Connections	Excluded service	Excluded service	
Single phase single element	175.10	120.10	TBD
Single phase two element	220.10	120.10	TBD
Three phase DC	253.00	153.00	TBD
Three phase CT	-	-	TBD
IMRO Program			
Single phase single element		57.00	67.00
Single phase two element		103.00	133.00
Three phase DC		103.00	133.00
Three phase CT		300.00	360.00
Fault Replacement			
Single phase single element		57.00	83.00
Single phase two element		103.00	167.00
Three phase DC		103.00	167.00
Three phase CT		300.00	450.00
Wasted Visit – Non Technical		Under \$8.56/cust CS cost. 5% revisits tech and non-tech	5% @ \$26.60 ea
Wasted Visit – Technical		Under \$8.56/cust CS cost. 5% revisits tech and non-tech	9.75% @ \$26.60 ea
Meter Board		5% @ \$30 each	5% @ \$20 ea + \$35 for board.
Wiring Issues		1% @ \$320 each	1% @ \$320 ea
Asbestos		5% @ \$300 each	5% @ \$649 ea + \$35 for board + 5% @ \$20 each



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### 4.4 Commission’s Approach to IT Capital Expenditure Allocation

In the Draft Decision the Commission’s approach has been to allocate IT capital expenditure costs between DUoS and the metering price control on the basis of:

- costs of IT systems required for all customers, regardless of whose meter is installed, should be recovered through the DUoS price control and included in the non-network general assets — IT capital expenditure.
- costs of IT systems required only for customers that have the distributor’s meter installed should be recovered through the metering price control.

In undertaking its considerations in this area the Commission has used separate consultancies, acting independently to arrive at the allowable cost allocations to each pricing segment. UED is concerned that this approach does not ensure an integrated approach to the consideration of the IT requirements across the business.

While in the Draft Decision, the Commission on page 437 has noted advice from UED that there is a need to reallocate some of UED’s IT capital expenditure forecast from the metering control to DUoS, the Draft Decision materially reduces expenditure in both categories as shown in the table below:

	UED	Draft Decision
DUoS <sup>2</sup>	50.2	40.1
MPC <sup>3</sup>	16.8	7.79

UED has previously stated that it is required to replace its current customer information billing system. This is in part due to the significant impact of interval meters. UED’s approach has been to develop an overall IT strategy designed to meet the regulatory obligations and needs of the business. Key drivers for this approach have been:

- to support continuous improvement to drive economic value, reduce operational risk and improve customer service,
- ensure regulatory, legal and technical compliance,
- drive to standardise and simplify the IT environment to,
- the need to update/replace existing systems and architecture which was mainly developed in-house and in some instances lacks ongoing support; and
- the impacts of the IMRO in terms of high volumes, large data management requirements and large data transfer requirements. UED is required to store significant amounts of data associated with meters that record readings associated with meters

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<sup>2</sup> Table 7.36

<sup>3</sup> Table 13.12

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that record reading at 30 second intervals rather than 4 readings per annum. The technology required to perform the required functions simply does not exist in the company's current system.

UED's IT Strategic Plan supports the achievement of these objectives and contains a program of work to deliver the plan. UED provides the following estimates for the replacement of the Company's CIS and associated meter data management systems.

**Table 4.4 – Customer Information System (\$ million – real June 04)**

Item\Years	2006	2007	2008	2009	2010
Vendor	5.4	0.3	0.0	0.0	0.0
IS	1.0	1.0	0.8	0.8	0.8
Infrastructure	3.0	0.7	0.0	0.0	0.0
Project	8.4	0.0	0.0	0.0	0.0
<b>Totals</b>	<b>17.8</b>	<b>2.0</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>

The Commission is required to:

- assess whether this expenditure is prudent and efficient; and
- how much should be recovered via metering price controls or via DUoS.

UED engaged Accenture to independently assess both UED's IT capital program and the work plan to deliver that program. Accenture's reports are attached for the Commission's review.

UED notes that Accenture has assessed the program and work plan as appropriate and considers that the cost estimations included are conservative. UED requests that the Commission give due consideration to Accenture's findings as any reduction in the allowable revenue can be expected to severely impact on UED's ability to deliver a compliant interval meter solution as well as the efficiencies included in the PSO.

### 4.4.1 Outline of Systems and Reasons for Replacement

UED's existing systems were implemented in 1997/98 and are due for replacement. Many of the systems were developed in-house due to the lack of commercially available systems which met all requirements and could be readily interfaced with other existing systems.

The main limitations of the existing systems can be summarised as follows:

- The Interval Meter Store (IMS) system's current maximum capacity is considered to be around 20,000 – 30,000 interval meters and would require a re-architecting of the system to support the 595,000 channels required under IMRO.

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- UED's current billing system obtains data from IMS when calculating a DUOS bill. This process, as well as the process of aggregating the data into tariff readings results in a bill calculation time for interval data of approximately 30 seconds. With 496,000 interval meters in the UED patch, this equates to a DUOS calculation window of approximately 58 hours based on current computation times which would need to be addressed.
- UED's current end-to-end architecture has multiple points within the process where manual intervention is required. Currently, 1 person is required to support every 1000 interval meters from a business operations standpoint. With close to 500,000 interval meter there is a need to pursue the replacement of multiple systems with a single system implementation so that hand-over points between systems are reduced and the number of points of failure and the need for manual intervention are minimised.
- The current application, which is responsible for processing interval data from the Portable Data Entry (PDE) equipment also has a 30,000 interval meter limitation.
- UED's version of CIS, together with a number of the 3rd party products run on CIS are no longer supported by the relevant supplier. Additionally UED's version of CIS has been heavily customised to the point that 60% of the source code is custom developed. Due to this enhancement of CIS to scale to the process required data would be high risk and cost.

### IMRO impacts

Currently UED receives approximately 7,600 (UED read data channels from some 5,600 interval meters. Under IMRO, UED will have some 500,000 interval meters and will receive around 595,000 channels (data volumes are therefore calculated as 48 readings per day per channel).

Further, additional interval data is generated by business processes during the validation, estimation and substitution of data. Current market rules requiring a forecast to be generated out to the next scheduled reading date and versioning requirements result in more than doubling of the meter data that needs to be managed.

UED has estimated that this results in the total number of daily interval readings equalling 1,722,500 (multiplication factor of 2.9) or 82,824,000 individual consumption reads per day.

In addition to the volume and management issues outlined above, storage and data transfer issues also need to be addressed. UED estimates that it needs to be able to send to external parties approx. 9.9 GB per day, 5 day week (based on proposed format) or 35.9GB per day using current format.

### Ongoing updates

In addition to the need to replace ageing systems and meet IMRO impacts, UED has sought to recognise the continually evolving nature of market based systems, and provided for ongoing development in its assessment of future needs.



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### Options Considered

In considering UED's approach to system replacement, three options assessed were;

- Enhance existing systems and infrastructure (in-house)
- Outsource Meter Data Provider (MDP) responsibilities
- Replace existing systems with Vendor provided solution

As part of the assessment it was noted that there is no commercial solution immediately available to meet UED's projected needs. No external MDP had the capability to currently support the volume of interval metering and no software vendor had stated that they had a solution available to manage this data and processing volume. It was further noted that the interval metering rollout not only affects the storage of interval meter data but also the provision of that data to the market and the billing systems of UED by virtue of those components being required to make up an interval metering solution.

UED's preferred position is to proceed with Option 3 as the most cost effective and risk averse option.

To confirm its position, UED engaged Accenture to provide an independent assessment on whether:

- UED is required to replace its current customer information system or whether there are other alternatives available; and
- on the basis that UED is required to replace the current system, whether the proposed forecasts are reasonable and efficient.

On both points, Accenture has agreed with UED's position and accordingly a confidential report is attached for the Commission's review.

UED has established a formal project structure to manage the IT replacement project and has subsequently develop a Request for Proposals and shortlisted a number of suitable vendors. UED is currently in discussions with those vendors.

### Allocation of Costs

UED believes that before attempting to allocate costs between DUoS and the metering price control, it is important to assess the total costs of the IT replacement project. The Commission has failed to do this in the Draft Decision. Having once assessed the total project costs, UED believes that an allocation based on functionality can then be made.

UED has made an arbitrary 60/40 split between DUoS and Metering Price Controls for the original installation and 100% for the ongoing data storage into the metering price controls.

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**Table 4.5 – Revised Costings (\$ million – real June 04)**

	2006	2007	2008	2009	2010	Total
<b>New Connections</b>						
Single phase single element	0.17	0.17	0.47	0.47	0.47	<b>1.76</b>
Single phase two element	0.19	0.19	0.19	0.19	0.19	<b>0.96</b>
Three phase DC	0.54	0.54	0.54	0.54	0.54	<b>2.70</b>
Three phase CT	0.10	0.10	0.10	0.10	0.10	<b>0.51</b>
<b>Sub Total</b>	<b>1.01</b>	<b>1.01</b>	<b>1.31</b>	<b>1.31</b>	<b>1.31</b>	<b>5.93</b>
<b>IMRO Program</b>						
Single phase single element	0.00	0.00	0.84	0.85	0.85	<b>2.56</b>
Single phase two element	-	-	6.45	6.49	6.54	<b>19.48</b>
Three phase DC	0.60	0.61	5.90	5.93	5.96	<b>19.01</b>
Three phase CT	0.12	0.12	0.28	0.28	0.28	<b>1.07</b>
<b>Sub Total</b>	<b>0.73</b>	<b>0.73</b>	<b>13.47</b>	<b>13.55</b>	<b>13.63</b>	<b>42.11</b>
<b>Fault Replacement</b>						
Single phase single element	0.03	0.17	16.26	0.04	1.49	<b>17.99</b>
Single phase two element	0.03	0.06	0.06	0.06	0.06	<b>0.28</b>
Three phase DC	1.12	4.53	0.19	0.08	0.08	<b>5.99</b>
Three phase CT	0.02	0.02	0.02	0.02	0.02	<b>0.09</b>
<b>Sub Total</b>	<b>1.20</b>	<b>4.78</b>	<b>16.53</b>	<b>0.20</b>	<b>1.65</b>	<b>24.35</b>
Wasted Visit – Non Technical	0.01	0.02	0.18	0.06	0.07	<b>0.33</b>
Wasted Visit – Technical	0.01	0.04	0.35	0.11	0.13	<b>0.64</b>
Meter Board	0.09	0.26	2.53	0.79	0.94	<b>4.60</b>
Wiring Issues	0.02	0.05	0.53	0.17	0.20	<b>0.98</b>
<b>Sub Total</b>	<b>0.12</b>	<b>0.37</b>	<b>3.59</b>	<b>1.12</b>	<b>1.35</b>	<b>6.55</b>
<b>Total All Meter Costs</b>	<b>3.05</b>	<b>6.88</b>	<b>34.90</b>	<b>16.18</b>	<b>17.93</b>	<b>78.95</b>
IT Capital	7.10	2.00	0.80	0.80	0.80	<b>11.50</b>
Other Equipment	0.50	0.20	0.10	0.10	0.10	<b>1.00</b>
<b>Total Capital Expenditure</b>	<b>10.65</b>	<b>9.08</b>	<b>35.80</b>	<b>17.08</b>	<b>18.83</b>	<b>91.45</b>

Note: IT costs have been allocated 40% to IMRO and 60% to DUoS

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### 4.5 Operation and Maintenance Expenditure

#### 4.5.1 Meter Maintenance

UED notes the Commission's acceptance of 'Maintenance – meters' expenditure as shown in Table 13.17 on page 440.

#### 4.5.2 Meter Data Management

ECG note in their report the following;

- “whilst data handling and processing activities would change, the efficiency gains from the IT systems should offset the costs due to the added complexities”
- “However, there should be recognition that the new IT system should offset some of the costs associated with the management of the extra data.
- ECG also recognises that there could be additional issues with data validation and reconciliation for interval meters and the amount of data available to retailers could result in additional inquiries.”<sup>4</sup>

ECG considers that it is likely that a cost increase of only 20-40% should suffice.

UED strongly supports the ECG assertion that handling of interval meters is more complex but questions the balance of the ECG position.

Interval data complexity starts with probe robustness and repeatability in being able to download the interval data at the meter face to the PDE. Higher error rates and download times are experienced in addition to the access issues which apply to both interval meters and basic meters.

Uploading interval meter data from the PDE cradle through the meter reading management system also results in a far higher error rate than basic meters. This higher error rate is particularly noticeable on the first read after a meter exchange and may be due to failure of initial validation or incorrect meter setup. Higher error rates for interval meters and interval data continue through the data validation and estimation process to extraction of the data for issuing to the retailers and National Electricity Market Management Corporation Ltd (NEMMCO).

It should also be noted that where an estimate has occurred with a basic meter, the next actual read provides a mechanism for self-correction. With an interval meter the data would need to be estimated based on the metrology procedure and NEMMCO validation and substitution rules. Data downloaded at a later time then replaces the earlier version and previous estimates and data versioning needs to be managed. For a quarterly read customer 4 pieces of basic meter data per year is replaced by 17,520 pieces of interval data. Alternatively with forward forecasts 8 pieces of basic data compares to 35,040 pieces

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<sup>4</sup> ECG Review of Costs for the Interval metering Rollout, 1 June 2005, p42



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of interval data. Volume differentiation is further exacerbated by the number of data streams per meter and the number of data versions held.

The simplified statistics for internal data management are that one Full-time Employees (FTE) could manage 1,000-2,000 interval meters per annum and the associated errors within the data management systems, whereas the basic or accumulations meters result in FTE support of more like 1 FTE per 100,000 basic meters. For each 100,000 basic meters that are exchanged to interval meters this implies an extra 100 FTE's to manage the data.

UED envisages improved validation and data handling processes once the new IT system is fully bedded in, however this is not expected to occur until 2008. UED has repeatedly advised the Commission and their consultants that there are no IT vendors operating in Australia with National Electricity Market (NEM) compliant data management processes and system designs handling the volume of meter exchanges and the volume of interval data envisaged in the next 5 years.

The key driver of the costs for data management from the PDE to the gateway and out to retailers/NEMMCO is the number of FTE's to support interval meters. UED has attempted to incorporate efficiencies into its process planning by forecasting that a new IT system may be capable of 1 FTE per 10,000 interval meters by the end of the 5 year period and 1 FTE per 15,000 interval meters for the last two years ie with at least three years of operation and fine tuning of the system. UED also note that the IT support costs that were to ensure that the system achieved this level of operation have been severely reduced by the Commission, leaving some doubt as to whether the system and business processes could achieve this result.

UED has already built in a 10-fold improvement in the management of interval meter data and believes that this is already a stretch target. The ECG on the other hand appears to believe that 1 FTE should be able to manage about 120,000 to 140,000 interval meters. If this is the case, we question why current Meter Data Agents (MDA) charge several hundred dollars per annum to do this management for potentially more simple metering configurations.

As such UED strongly disagrees with the ECG methodology and believes that a 140 fold improvement is highly unlikely in the next pricing period, given the relative immaturity of dealing with the expected volumes of data streams, meter exchanges, data versioning etc and the unproven ability of the IT systems under review for both the volumes and the Australian metrology conditions. Past experiences with new PDE's and probes would also support a high error rate for some initial period, impacting meter reading and uploading capabilities.

### 4.5.3 Project Management

ECG states on page 43 of its report "... that planning and management of a project this size to be critical to a successful outcome of meters installed within the timeframes outlined by the Commission." ECG propose that a management team of 4 staff consisting of 1 project manager, 1 contracts manager and 2 support staff for this activity at an average cost per FTE of \$90,000 to \$110,000.

In the PSO, UED proposed a 5 person project team for the project consisting of:

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- a project manager co-ordinating all tasks and providing upwards, and all of business communication.
- 2 meter managers – one concentrating on procurement, meter stocks, logistics of the stock and the second metering manager concentrating on installation resources, program of suburbs, difficult sites, additional complaints and clean up.
- 2 subject matter experts to link the field work to internal systems and processes and the project/IT systems:
  - one resource ensuring that meter field work is correctly updated into systems, all error queues associated with service order initiation close out are dealt with and resolved in a timely manner, additional service desk issues and new metering charges application,
  - the second resource ensuring that data commissioning occurs in a timely manner, manage data stream updates, replication to NEMMCO, data validation and substitution errors etc.

These subject matter experts are considered part of the overall program management in order to ensure that errors are minimised prior to normal scheduled reads. In the first few years the subject matter experts would also be required to ensure that processes worked on the old systems and to ensure opportunities for learning were communicated into the IT project at the earliest opportunity. These resources would also be the gatekeepers of work to IT resources and project resources to do system fixes, run projects to clean up data etc.

Other costs will include audit and validation of processes, accuracy of field work, volumes rolled out to ensure that any inaccuracies are resolved in a timely manner.

UED considers the deployment of 5 resources is not unreasonable. In addition, UED believes the cost of good project management skills and metering manager specialists, either via contract or as a full time employed resource, at \$150,000 pa and other subject matter resources at \$100,000 pa would better reflect market rates.

UED resubmit its previous project costs and accepts the ECG's training costs.

UED proposed overall capital expenditure costs are set out below.

### 4.5.4 Customer Services

The Commission notes that customer service costs include costs associated with making appointments, multiple visits, edits to customer communications/mail-out and dealing with consumer complaints. It expects that distributors already have developed an information package for customers and as such this would only require minor edits.

The Commission also noted that UED had expensed costs associated with the issues on difficult sites. UED provided this in the template with the express comment that these were to be treated as capital.

In its PSO UED provided the incremental costs caused by the IMRO, including the additional work to exchange higher volumes of meters, higher levels of tariff changes, tariff/billing queries, customer communications, customer/retailer queries and customer



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complaints. Based on previous experience and the perceived complications of interval metering, UED expects complaints and queries in the following areas:

- meter box issues – won't shut, viewing slit in the wrong place, new meter box size, colour, etc.
- off supply – loss of fridge or freezer food, potential for damaged flooring
- multi- meters – number of meters changed at site
- issues such as the customer not asking for the new meter, is unable to read it and doesn't match the old bill look
- customer lost the correspondence relating to reading the new meter or can't relate the total consumption register to several weeks/months ago
- unsatisfactory service – meter installation resource was rude, localised damage to garden, etc, time was not convenient
- isolation of businesses during working hours
- load control – old time switch worked better, cannot see the time switch on/off times, or a contactor has been installed and the future responsibility for the contactor rests with the customer.

Similar issues were raised by consumer representatives at the Commission's workshop held in July 2005.

The level and type of communication program planned by the Commission and the Victorian Government will be critical. UED is not yet aware of the Commission's plans in this area, however based on experience UED recognises that a letter advising of the imminent roll out is ineffective. UED considers that there is a need to provide an upgraded charter, as well as letters advising of the meter exchange and liaison with retailers on metering requirements (whether there is a voluntary change of tariff or mandatory tariff change and any data replication issues). Further communications in the form of advertisements, media campaigns etc managed by the Commission will be required. UED has not allowed any costs to cover the more extensive communications program.

Given the volumes of meters to be rolled out as a consequence of mandatory IMRO requirements or non compliant meter replacements, UED is not expecting any advertising or media campaign to result in bringing forward the meter exchanges from the largely geographic type roll out proposed.

In the PSO, UED customer costs included:

- Complaints and the Energy and Water Ombudsman (Victoria) (EWOV) cases (based on past experience);
- 1% installation with EWOV case at \$3,500/case, and
- 2% installations with a complaint at \$548/compliant.

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- IVR programming and updates to accommodate higher levels of customer queries from each mail out.
- Development of a revised customer charter.
- Development of a customer advice letter and mail out.
- Additional costs caused by extra revenue protection and management of any meter details inaccuracies/misuse which may need to be revised with retailers with potential billing and meter data roll backs and re- issue.
- An increase in 1<sup>st</sup> time bill queries after an interval meter is installed and general billing queries about how any estimates are derived, why the bill looks different, any tariff changes caused by retailer (or customer) request.
- Additional costs associated with data replication across internal systems and out to the market and the management of these error queues eg closure of service orders, management of the meter exchange from basic to interval across systems and to the market (excluding meter data management).

In view of the workload above, UED consider the reduction of UED's submission from \$15.73 to \$8.56 as unacceptable and that its initial submission should be re-instated.

**Table 4.6 – Back Office Costs (\$ million – real June 04)**

	2006	2007	2008	2009	2010	Total
Consumption data management	3.23	3.01	5.70	5.00	5.62	22.57
Project Management	0.98	0.88	0.78	0.78	0.78	4.20
Customer Services	0.47	0.31	2.12	0.92	1.05	4.88
Total	<b>4.68</b>	<b>4.20</b>	<b>8.60</b>	<b>6.70</b>	<b>7.45</b>	<b>31.63</b>

### 4.5.5 Maintenance – Meter Data Services (IT Related)

In its assessment of IT related maintenance costs for meter data services, ECG has based its costs on a derived generic metering data services. These costs included:

- Hardware – licences and service level agreements, consumables for system backup
- Software – licences and Service Level Agreement (SLA) for vendor maintenance and support
- Labour – maintenance and support, system and data backups etc for Meter Data Store (MDS) servers, storage systems, networks, and support of SLA for hardware and software.

UED has reviewed its IT related maintenance costs for meter data services. Vendor maintenance and licences costs have been included in the IT operating expenditure as have the resources required to support the Meter Register System (MRS) system and the



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MDS system. The licence fee is based on the costs of the licence to support additional interval meters.

Resources to support the software and hardware environments to support MDS are included in the support of SLA. Additional hardware (disk space) for data storage and the additional licence costs to support a larger database are included in ongoing capital under MDS.

UED considers the numbers envisaged by the Commission to be extremely low. The constant change environment in which these systems operate necessitates a high level of operational support. The ongoing Information System (IS) operating costs provided as part of UED's PSO include the support for a disaster recovery, test and development environment in addition to the production environment. UED has no break down at a task level for support costs for each of the environments. We estimate that 2/3 of the IT operating costs support the production environment in the activities below and the other third supports the "other" environments ie disaster recovery, test and development. The IS support operating costs include management of the following across production, test and development and disaster recovery environments as appropriate;

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**Table 4.7 – IS Operating Services**

Services	Scope	Activities
Hosting Services	Data Centre provision	Management of physical tile floor space within Data Centres
	Environment control services	Power, temperature, humidity control
	Perimeter Security	Controlled access to facilities, including on-demand (notice) and emergency access.
Server and Storage Services	Server	Provision of Hardware Maintenance Services - 3rd party-based Operation, maintenance and administration of UNIX Server platforms
	Storage	Provision of Hardware Maintenance Services - 3rd party-based Operation, maintenance and administration of enterprise storage platform (SAN) Operation, maintenance and administration of direct storage pool, SAMBA, RAID
Data Retention Services	Backup and Restore	Operation, configuration, administration and maintenance of Backup and Restore Services in accordance with Record Retention Policies.
	Data Archiving	Operation, configuration, administration and maintenance of Data Archiving Services in accordance with Record Retention Policies.
	Tape Library Management	Operation, configuration, administration and maintenance of Tape Library in accordance with Record Retention Policies.
Data Base Services	Administration Services	Operation, configuration, administration and maintenance of supported Oracle Data Bases in accordance with Service Levels.
	Connectivity Services	Operation, configuration, administration and maintenance of Oracle DB Connectivity in accordance with Service Levels.
	Performance Services	Operation, configuration, administration and maintenance of adequate Oracle DB performance characteristics in accordance with Service Levels.
Disaster Recovery and Business Continuity Services	Planning Services	Maintenance of Plans, Procedures and Processes
	Management Services	Management and co-ordination of 6-monthly DR Trials.
	Administration Services	Administration and up to date management of DR technology and solutions.

Above services performed using the following service support processes:

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**Table 4.8 – IS support Services**

Services	Scope	Activities
Service Desk	Customer Contact	Compliance with ITIL Service Desk function Provision of a single point of contact Electronic creation and issuing of Incident Records Prioritising and classifying incidents in accordance with the agreed priority coding systems and service levels Initial Assessment and Resolution of Incident Monitoring and Escalation Managing lifecycle of Incidents Achievement of incident service levels Communication Provision of a Customer Contact/Service Desk System Provision of Remote control software for remote support of users Reporting
	Incident Management	Compliance with ITIL Incident Management Process Detection and Recording Classification and Diagnosis Provision of 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> levels of support as required Managing Escalation Process Resolution and Recovery of incidents Closure of Incident Communication Post Incident Reviews Includes the provision of an Incident Management System Reporting
	Service Request Management	Compliance with ITIL Change and Incident Management Process Achievement of request service levels Provision of a Service Request System Reporting
Problem Management	Problem Control	Compliance with ITIL Problem Management Process Managing the knowledge base Establishing problem records Investigating and diagnosing root causes (results in identification of a known error) Providing workarounds to minimise impact on service levels Reporting on outstanding problems and their impact
	Error Control	Raising Requests for Change Providing improved workarounds for the known error Reporting on known errors and their impact
	Proactive Problem Management	Trend analysis of incidents and problems Pre-emptively diagnosing and resolving problems before they result in incidents
Change Management	Change Management Services	Compliance with ITIL Change Management Process Raising requests for change (RFCs) in accordance with the UED Change Management process Participation in Change Advisory Board Provision of a back-out capability compliant with UED change process
	Configuration Management Services	Compliance with ITIL Configuration Management Process Identification, recording and reporting of versions and relationships for all Configuration Items within the Supported Environment. Provision, administration and management of a Configuration Management Data Base System (CMDB) Status accounting for all changes as they move through the release management process
	Release Management Services	Compliance with ITIL Release Management Process Release Planning Release Building Release Testing Release Implementation
Operations Management	Event Monitoring Services	Maintenance of Event Monitoring System Pro-active, automated problem detection and prevention according to predefined thresholds Utilise/Integrate/complement current IBM Tivoli Event Monitoring

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Services	Scope	Activities
	Job scheduling and execution	Operation of Batch environment and job schedules including modifications of the Batch no greater than 2% per month of the current Batch volume. Utilise current BMC Control-M system
	Operational and procedural support	24x7 Data Centre Operations including management, maintenance and support of manual processes and procedures. Maintenance and support of middleware environment and infrastructure

UED believes the Commission's Draft Decision for Maintenance – metering data services (IT related) as set out in Table 13.18 on page 441 significantly understates the costs required. UED's amended Maintenance – metering data services (IT related) costs are set out in the table below.

**Table 4.9 – Metering – IT Operating Costs (\$ million – real June 04)**

	2006	2007	2008	2009	2010	Total
<b>Meter Reading System</b>						
Maintenance			0.05	0.07	0.07	0.20
Support	0.50	0.50	0.40	0.40	0.40	2.00
Licence			0.07	0.10	0.20	0.40
<b>Sub Total</b>	<b>0.40</b>	<b>0.40</b>	<b>0.50</b>	<b>0.60</b>	<b>0.60</b>	<b>2.60</b>
<b>Meter Data Management System</b>						
Maintenance			0.30	0.30	0.40	1.00
Support	0.40	0.40	0.40	0.50	0.40	2.10
Licence			0.30	0.10	0.20	0.60
<b>Sub Total</b>	<b>0.90</b>	<b>0.90</b>	<b>1.50</b>	<b>1.30</b>	<b>1.40</b>	<b>5.90</b>
<b>Total</b>	<b>1.30</b>	<b>1.30</b>	<b>2.00</b>	<b>1.90</b>	<b>2.00</b>	<b>8.60</b>



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**Table 4.10 – Total Operating & Maintenance Costs (\$ million – real June 04)**

	Original Submission 2006 – 2010	Draft Decision 2006 - 2010	Current Position 2006-2010
Standard Metering Maintenance	2.0	2.9	2.0
Interval Metering Maintenance	1.2	- (1)	1.2
Meter Reading – Basic	9.2	10.1	9.2
Meter Reading – Interval	3.1	3.5	3.6
IT	13.2	7.2	8.6
Back Office	31.8	17.2	31.7
<b>Total</b>	<b>60.5</b>	<b>40.9</b>	<b>55.8</b>

(1) Included in total maintenance of \$2.9m

### 5 Allocation of Risk in Interval Metering

UED raised in the PSO a number of risks associated with a mandated roll out of interval meters. The mandatory nature of interval metering program creates more risks beyond UED's control which is significantly different to the risks that UED would normally manage in its poles and wires business. While UED is able to manage the risks associated with normal business operations, in the interval metering program UED has no choice but to install meters to meet the Commission's timetable thus placing reliance on a relatively immature interval meter market and the systems to support the rollout and management of meter data.

UED has previously identified several asset stranding risks, only some of which have been addressed by the Commission. These risks include:

- replacement of existing basic meters beyond the end of their useful life.
- stranding of interval (meter or data) technology based on customer/retailer request.
- stranding of interval meter due to changes in regulatory rules – eg lowering the contestability threshold, enabling first tier metering contestability.
- stranding of meters due to lack of robustness or ability to meet accuracy requirements over the expected life of the assets.
- stranding due to a change to more stringent technical requirements and accuracy standards (eg changes to the metrology procedure or as a result of Trade Measurements Victoria).

While in some instances options exist to seek a review of costs and charges relating to some issues, the lack of certainty increases the overall level of risk faced by the business.

UED also raised a number of regulatory risks which impact on the interval meter roll out and cost recovery approach, these include:

- the decision by the ACCC that interval meters that become remotely read are considered fully contestable and subject to retailer choice.
- the Joint Jurisdictional Regulators recommendation that a retailer has the choice of responsible person.
  - for all first tier customers with consumption greater than 'z' where determined by the jurisdiction.
  - all second tier customers with annual consumption greater than 'z'.
  - all first tier customers with annual consumption less than 'z' that have a meter that meets the requirements of meter types 1, 2, 3 and 4 where determined by the jurisdiction.
  - all second tier customers with annual consumption less than 'z' that have a meter that meets the requirements of a metering installation type 1, 2, 3 or 4.

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- The Joint Jurisdictional Regulators recommended that the distributor be the responsible person for metering services for first tier and second tier customers with annual consumption less than 'z' that have a meter that does not meet the requirements of a type 1, 2, 3 or 4.

The Commission has chosen to adopt the wording that interval meters that are read remotely and that have the capability to meet the requirements of a type 1, 2, 3 or 4 meter may be retailer choice. This implies that UED is only responsible for the provision, reading and data management of an interval meter whilst it is manually read and will receive a prescribed service charge. UED does not believe it is guaranteed cost recovery, should any of the following scenarios occur (this is not an exhaustive list):

- if a customer chooses a different retailer who adds communications to a UED meter, UED has no further cost recovery for systems implemented to support the meter data management while the meter provision charge would alter from a prescribed service to an excluded service with no guarantee of cost recovery.
- if a customer decided to handback the communications due to cost, lack of use etc, then presumably the meter provider charge flips back from an excluded service charge to a prescribed service charge and UED also commences meter data management.
- the above scenarios can also occur where a new customer moves into the premise and does or does not want the communications.
- this same flipping of charges issue also occurs at the 'z' threshold for contestability where customers consumption may go above the threshold into metering services contestability and possibly back down again.

In the network business, UED would not make such extensive investment decisions on such a tenuous ability to recover costs. The Commission decision to separate all metering services out of the regulated asset base to create a new metering asset base creates a level of uncertainty which will give rise to charging difficulties that will inevitably be encountered. A range of new excluded service charges is likely to arise for management and communication service between customer, retailers and distributors.

The risks associated with perceived technology changes are exacerbated by the growth potential for metering manufacturers and other metering support businesses. While the Commission and its consultants have stated that they do not believe there will be much change in the metering technology over the next pricing period, within the space of 18 months the Commission's view on metering asset costs has changed by some \$10-60 per meter. UED's current position of meter asset costs based on tender responses is relatively consistent with the Commission's view on meter costs used in IMRO Draft Decision report of March 2004.

The level of uncertainty regarding whether UED is able to recover its costs for metering assets over the proposed 10 years under the prescribed services banner combined with the minimal ability to move the prescribed charges to reflect any stranding within the charges as is currently the practice under the normal network asset base creates an uncertain investment environment.



## Revenue Requirement – Metering

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The Joint Jurisdictional Regulators review establishes the concept of a ‘z’ threshold for metering services contestability that is managed by each jurisdiction. The process for deciding the factor is yet to be determined. Similarly, the metrology harmonisation programme currently offers three different code change packs to enable the Market Rules to be varied year upon year within the next pricing period adding to the uncertainty.

Given the national reform process and the current national metrology harmonisation program, how can the Commission guarantee the cost recovery of these investments for the next 10 years from the date of asset installation when it is highly likely that the above processes may impact its ability to influence and control outcomes going forward.

UED notes the comment attributed to the Victorian Minister in Hansard recently stating that it is still uncertain as to “what type of meter we put into play”. This implies uncertainty as to whether the metering requirement for the rollout relates to a remotely read interval meter deployed by the retailer’s service provider or a manually read interval meter deployed by the distributors. Given this level of uncertainty, UED considers the level of risk surrounding the Interval Meter program to be significant and seeks a level of certainty from the Commission as to UED’s ability to recover its costs over the longer period.

In order to compensate for this increased risk, UED believes the Commission should either:

- adopt a conservative approach to estimating the costs of complying with this mandated rollout; or
- provide the business with an opportunity to earn a rate of return on these assets that is commensurate with the higher risks involved.

For simplicity UED has added 1% to the cost of capital and has applied 7.5% as its return.

## Revenue Requirement – Metering

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### 6 Financial Summary

**Table 6.1 – Metering Building Block Costs (\$ million – real June 04)**

	2006	2007	2008	2009	2010	Total
Return on Assets	0.4	1.0	2.4	3.9	4.6	12.3
Regulatory Depreciation	0.9	2.4	4.8	7.5	9.4	25.0
Operating & Maintenance Expenditure	8.6	8.3	13.8	12.0	13.1	55.8
Forecast Tax Liability	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total Revenue Requirement</b>	<b>9.9</b>	<b>11.6</b>	<b>21.0</b>	<b>23.5</b>	<b>27.1</b>	<b>93.1</b>

### 7 Concluding Comments

In responding to the Commission's Draft Decision, UED argues that:

- UED's approach to meter volumes has been based on a defined meter testing regime and past experience. The Commission has presented no supportive arguments for amending these volumes.
- UED has amended its meter purchase costs based on recently obtained costs through a competitive tendering process and as such these amended costs should be accepted.
- As confirmed by its consultants during the metering workshop, the Commission's allowance for inventory management fails to recognise the material costs associated with meter disposal.
- As confirmed by its consultants during the metering workshop, the Commission's allowances for installation costs are not comprehensive. UED has provided arguments in support of the real costs incurred in meter installation activities based on an internal assessment of required tasks, current contract rates and where necessary indicative quotes;
- UED needs to replace its CIS system. UED believes that the Commission must assess UED's overall IT needs before making any allocation between DUoS and the meter pricing control to ensure that all costs are appropriately assessed and allocated.
- In forecasting IT operating expenditures UED has adopted a realistic approach which factors in a real level of achievable efficiency.
- UED's submission for IT expenditure is based on actual systems and experience and not on a theoretically derived solution which bears little relevance to UED's business needs.
- UED believes there are still significant risks that have not been allowed for in the draft decision.