Submission to the Australian Energy Regulator:

Guidelines, Models and Schemes for Electricity DNSP's

UNITED ENERGY
Distribution

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Key Messages

- United Energy Distribution (UED) welcomes the considerable number of initiatives in the proposed guidelines, models and schemes which give businesses the flexibility to nominate particular parameters and values in the Australian Energy Regulator's (AER) schemes and models which apply to them. This flexibility preserves the framework in the current Rules for businesses to develop complete regulatory proposals suited to their circumstances;

- UED also supports the AER's decision to defer further examination of a number of complex issues related to its guidelines until the regulatory framework has effectively transitioned from jurisdictions;

- UED highlights concerns with the existing Victorian S-factor Scheme, and urges the AER caution in seeking to adopt a similar scheme on a go forward basis. Over time, there have been a number of debates with the ESC over the practicalities around the Scheme, but the ESC has found it difficult to break out of a scheme that it initially locked into, and in effect creates long term commitments to rewards/penalties. UED believes the Scheme to be very complex, and not understood by many, with those complexities leading to a dulling of the incentives and some unintended consequences when parameters are changed during the course of the Scheme;

- UED notes the AER's proposed roll forward model requires asset disposal values to be recorded on the basis of actual sale proceeds and not the depreciated value of the asset. UED submits that this requirement is a significant impediment to the operating and capital efficiency of a business and should be reconsidered;

- UED considers that the AER should not rule out the possibility of including capex in an efficiency benefit sharing scheme, but should defer this matter for later consideration;

- UED considers that the AER should begin to develop criteria to assess whether a DNSP is reaching its efficiency frontier, thus justifying a change in the business/customer sharing ratio under an efficiency sharing scheme;

- UED suggests that the AER should re-examine its case for including negative carryovers in an efficiency benefit sharing scheme;

- UED disagrees with the AER's proposed approach of treating planned interruptions in the same way as unplanned interruptions for the purpose of the service target performance incentive scheme.

1 Introduction

1.1 Background to UED

UED is one of the largest Victorian electricity distributors and provides services to some 600,000 end-users in Melbourne's southern and eastern suburbs. UED's network has been subject to three Victorian price reviews and the company has contributed to several Victorian consultations on the development of electricity regulatory guidelines. That experience has informed many of our comments in this submission.

2 UED General Response to Guidelines

2.1 UED principles

In the AER's January/February 2008 preliminary consultation, UED submitted that the AER's approach should be to develop distribution guidelines which avoided imposing uniform methodologies and procedures on all businesses. The guidelines should enable DNSPs to submit proposals to the AER which were responsive to individual business needs and drivers, and which would at the same time contribute to the interests of consumers.

To encourage these outcomes, UED proposed a number of 'working principles' for the guidelines[1].

2.2 AER proposals

UED welcomes the considerable number of initiatives in the proposed guidelines, models and schemes which generally follow UED's recommended principles and preserve the frameworks in the current Rules for businesses to develop complete regulatory proposals. Businesses will be free to nominate:

- the depreciation profile to be used in the PTRM;
- the form of control to be used in the PTRM;
- whether actual or forecast depreciation should be used in rolling forward the regulatory asset base;
- certain specific features of an efficiency benefit sharing scheme;
- certain specific features of a service target performance incentive scheme.

UED also supports the AER's decision to defer further examination of a number of complex issues until the regulatory framework has effectively transitioned from jurisdictions. These issues include:

- an efficiency incentive scheme incorporating distribution losses;
- cash flow timing assumptions.

At the same time, UED notes that the April 23 workshop conducted by the AER raised a number of stakeholder issues which suggest that further consideration of the AER's proposals may be warranted. These proposals include:

- capex will not be included in an efficiency benefit sharing scheme (EBSS);
- a requirement for negative carryovers in an EBSS;

[1] See Appendix 2 of this submission.

- the proposed scope of available exclusions under a service target performance incentive scheme (STPIS);
- a requirement that planned interruptions should be treated in the same way as unplanned interruptions.

UED expands on these matters later in the submission.

2.3 Matters of major concern to UED

2.3.1 Design and operation of incentive schemes

UED notes that stakeholder submissions to the AER guideline consultations do not appear to have expressed major issues of concern with the design and operation of the two incentive schemes which the AER proposes to base largely on the ESC schemes in Victoria.

UED has discerned (and in one case experienced) what it regards as unjustified penalties from the operation of the EBSS and STPIS (S-factor) in Victoria due primarily to the possibility that a regulator may impose new targets and benchmarks for performance in the second regulatory period, which both destroys the symmetry of the schemes and greatly magnifies any carryover penalty (or reward) to a business in the second period.

UED's experience is that these anomalies are due to both:

- the inherent complexity of the schemes;
- the existing rules (or the regulator's interpretation of the rules).

If the rules allow the regulator to set new benchmarks in the second period which break the intended symmetry of the schemes without regard to the ultimate effects on a business; and/or the regulator refuses to make any adjustment to the scheme to rectify the anomalies caused by its actions, then UED submits that any incentive properties of the schemes will irrevocably weakened.

These vital matters are explored further in sections 6 and 7.

2.3.2 The roll-forward model

UED notes the AER's proposed roll forward model requires asset disposal values to be recorded on the basis of actual sale proceeds and not the depreciated value of the asset. UED submits that this requirement is a significant impediment to the operating and capital efficiency of a business and should be reconsidered. This matter is explored in section 4.

3 Post Tax Revenue Model (PTRM)

3.1 Depreciation

UED submitted that:

> Where the Rules provide for the DNSP to choose between alternatives in preparing a building block proposal, the PTRM must not be hard-coded to reflect one particular outcome e.g. straight line depreciation.

The AER has replied that[2]:

- The AER considers that the straight-line depreciation method used in the return of capital building block and for tax depreciation is the only substantive calculation that could be amended or replaced by DNSPs;
- The proposed PTRM and handbook clearly indicate that alternative depreciation methods may be suggested by DNSPs.

UED welcomes these assurances, and suggests that in formulating its framework and approach paper, the AER would note when its PTRM would need to be modified to accommodate a DNSP proposal which was not based on straight line depreciation[3].

3.2 Integrity of the PTRM

UED submitted that:

> The PTRM must process inputs accurately. Given that a new version of the PTRM will be required for distribution, it is important that there be an opportunity for the logic and mathematical integrity of the new version to be tested thoroughly before it is published. UED suggests that a suitably qualified expert should be engaged to conduct an independent review of the new version and report to the AER and to industry generally.

UED notes that the PTRM workbook (*Proposed PTRM excel workbook (April 2008).xls)* contains external links to sheets that are not accessible to users outside the AER. These links are not explained in the proposed PTRM handbook and it is not clear how they affect the calculation. There are also over 200 named ranges in the workbook that involve external links and/or reference errors. It appears that most, if not all, of these named ranges are unused. UED suggests that the workbook should be analysed using a tool such as *Name Manager 4.1*[4] to resolve these anomalies.

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[2] PTRM Explanatory Statement p 5-6

[3] UED assumes that the AER would make these structural changes, not the DNSP.

[4] Available at http://www.jkp-ads.com/officemarketplacenm-en.asp

3.3 Victorian transition

The AER has noted UED's comments that the PTRM must be consistent with clause 11.17.2 of the Rules, which applies to the calculation of the estimated cost of corporate income tax for Victorian distribution determinations taking effect on 1 January 2011.

The AER has responded to tax calculation matters as follows:

> Consistent with the approach to regulatory depreciation, DNSPs may alter the tax depreciation calculations to incorporate alternatives for assessment as part of their regulatory proposals.
>
> The tax depreciation calculations may also require amendment to comply with transitional provisions. The AER considers that these modifications are more appropriately dealt with during the framework and approach stage of each reset rather than through accommodating each jurisdiction-specific circumstance in the published PTRM[5].

UED welcomes the AER's recognition of Victorian issues, and also the restatement of its position regarding alternatives to straight line depreciation in a regulatory proposal.

3.4 Capex Recognition

UED submitted that the proposed 'hybrid' treatment of capex may be appropriate for transmission, but that for the majority of distributors, the bulk of capex is 'program' expenditure with little lag between capital expenditure and commissioning

UED notes that the PTRM will now incorporate capex on an 'as-incurred' basis.

3.5 Treatment of Inflation

UED submitted that it was well established that there was a bias in the observed yields for indexed CGS which, if used to forecast inflation, will produce a biased estimate.

UED supports the AER's proposal to estimate expected inflation based on a range of factors, including the latest estimates of forecast inflation by the Reserve Bank of Australia.

3.6 Capital Contributions

Given their pervasiveness, UED submitted that there was a strong case for taking capital contributions into account in the PTRM and supported the Commission's approach[6].

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[5] PTRM Explanatory Statement p 12

[6] Contributions are treated as revenue for tax. The DNSP's revenue requirement for the year in which the contributions are received is therefore increased to recover the tax payable on the revenue increase. The amount capitalised in the RAB is the DNSP's gross capex less contributions received.

UED notes the AER's intention to develop and consult on capital contributions as part of the proposed PTRM[7].

3.7 Cashflow timing issues

UED submitted that there may be a case for refining the modelling of cash flow timing but the end result needs to be reasonable, simple and transparent. UED's recommendation was that the current transmission PTRM assumptions should be retained in the distribution PTRM in the first instance, and that any changes to the assumptions should be considered for both models concurrently.

UED therefore fully supports the AER's intention to defer consideration of the issue of cash-flow timing assumptions for the distribution PTRM and to engage stakeholders in the context of the same potential amendments to the transmission PTRM.

3.8 Forms of control

UED submitted that the PTRM could be structured to accommodate the range of X factors envisaged by cl 6.5.9(c) of the Rules as a "menu of choices".

In response, the AER has noted advantages from specifying indicative methods to calculate X factors under the three basic forms of control that are widely used, and that the AER and DNSPs will need to amend the PTRM during each reset process to ensure that the actual form of control is appropriately applied.

[7] PTRM Explanatory Statement p 5. The AER will consider whether a national approach to treating capital contributions is feasible once full responsibility for distribution regulation has transferred to the AER in all jurisdictions.

4 The Roll Forward Model (RFM)

4.1 Initial comments

In the previous AER consultation, UED submitted that:

- based on Clause S6.2.1(e)(5) of the Rules, the RFM must have the flexibility to accept either actual or forecast depreciation as proposed by the DNSP;
- the RFM should be consistent with the PTRM in terms of capex recognition;
- the RFM must be consistent with the PTRM in respect of capital contributions and, where the Rules provide for alternative approaches, the RFM must similarly accept any of those alternatives.

UED observes that the RFM handbook has generally followed these recommendations, but there may be a potential issue with forecast depreciation as noted below.

4.2 UED issues

4.2.1 Forecast depreciation

The RFM Explanatory Statement says (p 5):

> The AER notes that clause S6.2.1(e)(5) envisages the application of alternative capex incentive frameworks in distribution determinations, in the form of actual or forecast depreciation. However, the AER prefers the use of actual depreciation as it provides a stronger capex incentive framework and has retained this as a default method in the proposed RFM. DNSPs will be able to suggest the use of forecast depreciation as it may be required under transitional provisions or otherwise suit the particular characteristics of the business.

UED's strong preference is for the use of forecast depreciation in the RFM, especially as the business is now approaching a "wave" of replacement expenditure for aging infrastructure. There is a danger that a regulator may only approve capex forecasts which are too low (this has been the Victorian experience), and the use of actual depreciation exposes a DNSP to a double penalty:

- If there is not enough forecast capex, the business bears the WACC loss when it has no choice but to make replacement investments within a regulatory period;
- The business must pay again through higher depreciation.

UED submits that its business characteristics require the use of forecast depreciation in the RFM and that this should be a central feature of the model (and not just an alternative to be added in special cases).

4.2.2 Asset disposals

UED notes the AER's proposed roll forward model requires asset disposal values to be recorded on the basis of actual sale proceeds and not the depreciated value of

the asset. UED submits that this requirement is a significant impediment to the operating and capital efficiency of a business and should be reconsidered[8].

Businesses should have discretion to dispose of unwanted assets without having to return any book value gain (or transfer any loss) to consumers. In other words, the DNSP takes the risk on disposal. If the disposal price is taken off the capital base, then the business may be doubly penalised – it loses the return on the depreciated asset and it may lose a capital benefit. The result would be an incentive not to dispose of unwanted and unproductive assets (and thereby direct the proceeds to more productive uses) but to retain the unwanted assets.

[8] UED recognises that the Rules appear to require disposal rather than replacement value.

5 Cost Allocation Guidelines

5.1 AER General Questions

In section 10 of its Discussion Paper, the AER seeks comments on seven specific issues. UED does not wish to comment on all these matters, but our responses below either directly or indirectly address several of them.

5.2 AER working assumptions for Cost Allocation Guidelines

UED generally supports the AER working assumptions in section 3.1 of the Discussion Paper, but notes that the Rules also set out specific jurisdictional requirements for cost allocation.

5.3 Selection of allocators

UED supports the AER's view in section 7.1 of the Discussion Paper that distribution businesses should select and justify the allocators for shared costs, rather than the AER determining them in advance.

5.4 Specific Guidelines for Victoria

The Discussion Paper (s 8.1) observes that clause 11.17.4 of the Rules requires the AER to make specific Victorian cost allocation guidelines. The essential direction in that clause is:

> The guidelines of specific application to Victoria:
>
> (1) must be formulated with regard to the ESC cost allocation guidelines; and
>
> (2) must be designed to ensure, to the maximum practicable extent, consistency between cost allocations as required by the ESC distribution pricing determination and cost allocation in later regulatory control periods.

The AER notes in section 8 of the paper that: it has had regard to a number of principles in developing its proposed guidelines for Victoria. Having done so, the AER suggests that its policy rationale for its proposed guidelines is essentially the same as currently applying in Victoria, with the exception of the use of avoided cost as an allocator.

Clause 2.2.4 (j) of the AER's proposed Victorian guidelines and 2.2.4 (e) of the proposed national guidelines both prohibit a DNSP from allocating shared costs on an avoided cost approach without prior approval by the AER.

The AER cites clause 3.6.7 of the ESC Electricity Guideline No 3 which states that:

> a defensible basis of allocation shall not be avoidable cost.

While UED acknowledges that the Victorian guideline has adopted this position, it needs to be remembered that:

- any guideline made by a jurisdictional regulator should not be seen as permanent national precedent under the current Rules if the Rules permit an alternative approach[9];
- There are legitimate reasons why an avoided cost approach may be acceptable.

5.5 AER rationale for its approach to avoided cost

Sections 8.2 and 8.3 of the AER Discussion Paper provide a rationale for the AER's cautious approach to the use of avoided cost. In general, these relate to the potential for manipulation or distortion of the regulatory process by using avoided cost to procure cross-subsidisation[10]. However, given that to substantiate an avoided cost approach may involve a significant information burden on DNSPs, UED suggests that a distribution business would not approach this task lightly.

UED also observes that:

- cl 6.2.8(a)(3) of the Rules provides that the AER may make guidelines on the classification of services, including the use of avoidable costs;
- economic efficiency recognises that efficient costs may lie between stand-alone and avoidable costs, and that therefore the potential use of the latter methodology should not be discouraged or marginalised by the AER guidelines.

Given the above safeguards, UED submits that the Discussion Paper's approach that a non-causal allocator can only be used either when the shared cost is immaterial or when the allocator meets a number of undefined AER requirements is unduly restrictive[11]. UED suggests that a broader exploration of the use of avoided cost should be permitted within the guidelines.

5.6 Other Victorian considerations

UED notes that the AER's evaluation of the Victorian transitional provisions involved a detailed comparison between the ESC's Guideline No 3 and the corresponding proposed AER cost allocation guidelines[12]. The AER's general conclusion was that with the exception of avoided costs, the proposed AER guideline clauses and the equivalent ESC clauses are similar, though differing in some matters of detail.

UED accepts this judgement as a preliminary observation, but wishes to

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[9] Given that jurisdictions generally derogated from the old National Electricity Code (Rules) and established their own frameworks.

[10] Discussion Paper s 8.2 p 23

[11] Op Cit p 25: such as "having regard to the potential outcomes of its use".

[12] Op Cit Appendix B

advise the AER if material differences between the ESC provisions and the proposed AER guidelines are discovered prior to finalisation of the AER guidelines.

5.7 Other issues

- The AER has stated that it is not bound by its guideline, but does state that the cost allocation method must be consistent with the guideline. It should be clarified that the AER and the DNSP are equally not bound by the guideline;
- Clause 5.2(b) of the guideline appears to contain overlapping information requirements which should be simplified. If subsections (2) and (3) are required, then subsection (1) should not be required.

6 Efficiency Benefit Sharing Scheme

6.1 Nature of the scheme

The elements of the proposed EBSS are:

- efficiency gains (or losses) to be carried over for five years;
- the efficiency gain for any year to be incremental - the difference between the under-spend in that year and the under-spend in the preceding year;
- the scheme to apply symmetrically to gains and losses (positive and negative carryovers);
- the focus to be on controllable costs so that forecasts and/or out-turns can be adjusted for changes in capitalisation polices and changes in demand versus forecast;
- allowance for some classes of uncontrollable costs to be excluded (proposed by the DNSP and agreed with the AER in advance);
- allowed increases/decreases for pass-through events to be excluded.

The above framework for an EBSS is similar to that operating in Victoria. UED has generally found the Victorian scheme to work acceptably, except that UED has discerned what could be unjustified penalties from the operation of the EBSS in Victoria unless the symmetry of the scheme is carefully preserved by the regulator. We illustrate this in the next section.

6.2 Properties of Incentive Schemes

Initial regulation in Victoria used a simple price path as a means of encouraging distribution network savings, whereby DNSPs could retain opex savings made within the regulatory period.

In the 2001 price determination, the ESC discerned a theoretical (but not proved) incentive for DNSPs to defer savings in the later years of a regulatory period in order to benefit from greater savings in the next period. The ESC therefore introduced the carryover mechanism, which it regarded as better providing a continuous incentive for DNSPs to seek cost savings[13]. Such a scheme can work well so long as it is not revised in moving from one regulatory period to the next.

The essence of the Victorian scheme is that the penultimate year opex for the current period (year 4) becomes the forecast opex for each year of the next period. The AER is proposing a similar scheme which it illustrates succinctly in Appendix A of its proposed EBSS:

[13] Cl 6.5.8 (c)(2) of the Rules also requires a continuous incentive to reduce expenditure.

Appendix A: Example of the efficiency benefit sharing scheme calculation

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Forecast opex	101	100	103	100	101	93	93	93	93	93
Actual	100	99	94	93	94(a)					
Incr'l gain/loss	1	0	8(b)	-2	0	(c)				
Efficiency carryover										
Year 1		1	1	1	1	1				
Year 2			0	0	0	0	0			
Year 3				8	8	8	8	8		
Year 4					-2	-2	-2	-2	-2	
Year 5						0	0	0	0	0
Carry forward						7	6	6	-2	0
Expenditure for pricing	101	100	103	100	101	100	99	99	91	93

AER NOTES:

(a) This figure is an estimate only because the actual operating expenditure amount is not known at the time of the regulatory reset. This estimate has been calculated using the equation:

A5 = F5 – (F4 – A4)

= 101 – (100 – 93)

= 94

The correction for this estimate, which has been omitted for simplicity, will impact the incremental gain/loss for year 6 and thus the carryover amount for year 11.

(b) E3 = [(F3 – A3) – (F2 – A2)] = [(103 – 94) – (100 – 99)] = 8

(c) The incremental gain/loss for year 6 will be calculated using the following formula:

E6 = (F6 – A6) – (F5 – A5) + (F4 – A4)

By making the actual year 4 outcome as the forecast from year 6 onwards, the *incremental* carryover amounts for each of the previous five years are offset by the same effect on revenue after five years as intended. Whatever the actual outcome in year 4, this would be the case But if there were a disconnect between year 4 and the next period forecast, the results could be disastrous for the service provider:

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Forecast opex	100	100	100	100	100	100	100	100	100	100
Actual	100	100	100	120	100(a)					
Incr'l gain/loss	0	0	0	-20	0	(c)				
Efficiency carryover										
Year 1		0	0	0	0	0				
Year 2			0	0	0	0	0			
Year 3				0	0	0	0	0		
Year 4				0	0	-20	-20	-20	-20	-20
Year 5						0	0	0	0	0
Carry forward						-20	-20	-20	-20	-20
Expenditure for pricing	100	100	100	100	100	80	80	80	80	80
Expenditure Assuming forecast Yr 6 is 120						100	100	100	100	100

The above example is based on Appendix A, assuming that:

- The forecast capex is set by the regulator at 100 assuming this to be the "efficient" level;
- The DNSP has a major overspend in year 4:
- The regulator does not adjust the forecast from year 6 onwards to match year 4;
- For simplicity, we have not used the AER's Year 5 calculation.

The net effect is that an overspend of 20 in year 4 has penalised the business by an (non-discounted) carryover amount of 100 (ie 5 x 20). If the forecast had been set at 120, the over-spend in year 4 would have been compensated in year 11 by a return to revenue of 120 - i.e. the negative carryover would have been a (non-discounted) 20 over five years.

This adverse result is due primarily to the possibility that a regulator may not set targets and benchmarks for performance in the second regulatory period, which preserve the supposed intention of the scheme.

If the rules allow the regulator to set new benchmarks in the second period which break the intended symmetry of the scheme without regard to the ultimate effects on a business; and/or the regulator refuses to make any adjustment to the scheme to rectify the anomalies caused by its actions, then UED submits that any incentive properties of the scheme will irrevocably weakened.

6.3 The AER's proposed approach

UED draws initial comfort from the AER statement in the proposed EBSS paper (s 2.2) that it proposes to favour the year 4 opex forecast:

> In assessing the forecasts the AER will place significant weight on the actual expenditure in the penultimate year of the regulatory control period during which the EBSS has been applied. Since the EBSS provides incentives for DNSPs to reveal their efficient level of opex, the AER considers it reasonable to expect the actual opex in the penultimate year of a regulatory control period to be the best indicator of the efficient level of opex available when determining forecast opex for the following regulatory control period.

However, this is counterbalanced by the statement that:

> The AER considers that it is not appropriate, when determining the efficient opex allowance for future regulatory control periods, to relate future targets to past outcomes on a purely mechanistic basis. That is, the AER will not require forecast opex for the following regulatory control period to be equal to actual opex in the penultimate year of the regulatory control period during which the EBSS is applied.

UED understands that the AER may be adopting this latter view because of clause 6.5.6 of the Rules which detail the efficiency matters to be taken into account when approving an opex forecast. However, UED urges the AER not to disconnect forecasts from year 4 outcomes without the most substantial reasons. Further, if such a disconnect is made, then UED submits that the parameters of an EBSS for a particular DNSP (or group of DNSPs) must be redesigned to ensure that there is no transitional penalty (or reward) in moving to a different forecast.

The AER notes in its Explanatory Statement (p 47) that: In calculating the carry-over amounts to be applied in the following regulatory control period, the EBSS will use adjusted forecast and actual opex figures. The adjustments may include:

- Allowance for capitalisation policy changes
- Allowance for demand growth
- Allowance for changes in Regulatory responsibilities
- Allowance for uncontrollable costs
- Remove opex for non-network alternatives
- Remove recognised pass throughs

- Variances in cost categories and methodologies, and errors.

UED accepts that such adjustments mean that both the AER and DNSPs will be matching "like with like" when comparing an actual outcome with forecast. Nevertheless, UED again urges the AER to ensure that the integrity of the EBSS is preserved when adjustments are made.

6.4 Negative carryover

Many stakeholders have queried the necessity for negative carryovers in an EBSS. There seems little doubt that a negative carryover can amount to a double penalty in some circumstances. The AER has maintained its view that in the absence of a symmetrical application of both negative and positive carry-over amounts, DNSPs would face significant incentives to shift opex into the fourth year of the period in order to increase forecasts for the following period[14] (and by implication, frustrate the operation of an EBSS)[15].

UED's view is that negative carryovers are less of an issue than preserving the integrity of the EBSS. However, given negative carryovers, the scheme must be made to work as intended and provide symmetrical outcomes for DNSPs.

6.5 Carryover period/sharing ratio

The AER has stated that it will reconsider the appropriateness of the carry-over period (or sharing ratio) where it is presented with evidence that a DNSP is approaching its efficiency frontier. Given that several Victorian DNSPs are now approaching their fourth pricing review, UED considers that the AER should begin to develop criteria to assess whether a DNSP is reaching its efficiency frontier.

6.6 Inclusion of capex

The AER has decided not to include capital expenditure in the EBSS, largely on the many grounds it perceives that DNSPs would have to defer capex. While UED does not consider the inclusion of capex in an EBSS as vital to effective efficiency incentives, a DNSP should have the choice to propose a capital efficiency scheme where the DNSP is willing to expose itself to the risks that such a scheme entails.

Rather than dismissing a capex scheme outright, UED considers that the AER should have deferred the matter pending further investigation of how an effective and non-distorting scheme could be developed.

[14] EBSS Explanatory Statement s 4.1.2 p 7

[15] During public consultation on 23 April the AER has suggested that as an alternative, the 4th year operating expenditure might be reviewed and compared to the other years and adjusted accordingly.

7 Service Target Performance Incentive Scheme (STPIS)

7.1 The need for a simple Scheme

UED strongly urges the AER to consider developing a simple and clear incentive scheme. UED is concerned that the incentive scheme in Victoria (and the one that will be potentially adopted nationally) is complex with that complexity diluting the incentive properties (because people don't fully understand the Scheme) and is prone to unintended consequences as the Scheme is managed and operated over time.

Some of the issues that flow from the complexity of the ESC's Scheme are:

- A "good performance year" is rewarded with a revenue bonus two years after the good year (which sounds reasonable), but is then followed by a corresponding penalty seven years after the good performance year. This lagged penalty seems totally counter-intuitive and is either an unintended consequence of the mathematics, or (as claimed by some) an intended consequence of someone with a very complex and unconventional view as to how an incentive scheme should operate.
- Changes to performance targets or incentive weightings (i.e. the amount of incentive for the same value of performance) during the life of the Scheme can have the effect of producing some significant penalties or rewards that are totally inconsistent with the reliability performances delivered for customers. Essentially, the mathematics breaks down in these circumstances.
- The nature of the Scheme sees the parameters and mathematics locked down in the year ahead of the price review period (the normal process) but this locking down of the formula having the impact of driving revenues (rewards and penalties) some 12 years hence.
- The fact that there is a 12 year time lag between setting the formuly and fully realising all the bonuses / penalties serves to "lock in" the Scheme on a perpetual basis – as regulators and service providers will be reluctant to tamper with the Scheme before the rewards and penalties have flowed in accordance with pre-existing regulatory decisions.

The above issues go to impacting the effectiveness of the Scheme, the risk created by the Scheme, and the flexibility of the Scheme going forward.

UED urges caution.

7.2 Key features of the proposed AER scheme

7.2.1 S-factor component

The proposed scheme is generally similar to that in Victoria. In the AER's scheme:

- the s-factor is symmetrical;

- determined by calculating the gap between targeted performance and actual performance in a year less the gap in the previous year. Only rewards (or penalises) long term systemic changes in performance rather than year on year variations;
- the reward or penalty is kept for five years (same as proposed EBSS);
- performance targets generally based on average performance over the past five years;
- outlier performance (e.g. due to extreme weather / events) will be excluded. In addition, events out of the control of the DNSP will be excluded;
- Application of the s-factor or a portion of the s-factor can be delayed in any one year to smooth the impact on prices (s-bank).

7.2.2 GSL component

The AER notes that where jurisdictional legislation imposes an obligation to operate a GSL scheme, clauses 6.2 to 6.4 of the AER scheme do not apply. Thus the existing Victorian scheme will continue.

7.3 Transition issues

The AER's Discussion Paper states:

> The AER recognises that issues may arise for DNSPs in the transition from a jurisdictional scheme to the national scheme, and if the national scheme's parameters or other attributes were to be altered between regulatory control periods. Therefore, the proposed scheme sets out that the AER will give consideration to an arrangement that reduces the impact of transitional issues. The AER shall decide on the appropriateness of the arrangement to address the transitional issue on the basis of:
>
> - materiality of the issue
> - reasonableness and fairness to the DNSP and customers
> - consistency with the objectives of the scheme.

UED would like to highlight a number of issues that it sees in managing transitions within the existing ESC S-factor Scheme, and therefore would expect to flow on to managing transitions within the proposed AER Scheme, or managing transitions between the existing ESC Scheme to the proposed AER Scheme.

As stated earlier, the ESC Scheme is very complex, with mathematics that few if any understand, and with a structure that does not cope well with change. Some examples are set out below that demonstrate that when parameters for performance targets, or the "incentive weightings" are changed, significant unintended consequences can occur which can be detrimental to individual companies or creating a windfall for others.

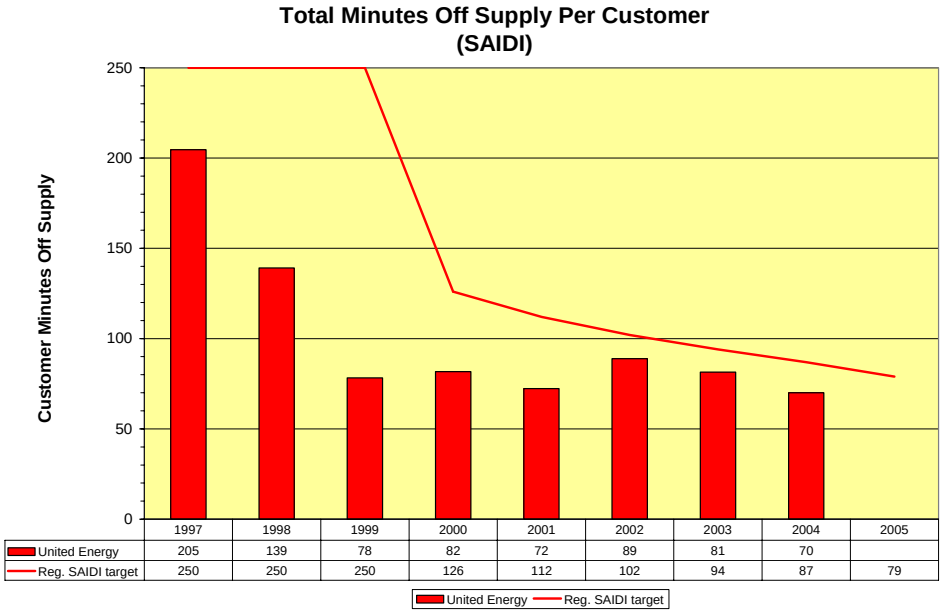
UED wishes to make the AER fully aware of the dangers in transitioning from one set of performance standards to another based on its experience with the operation of

the ESC's scheme in Victoria. The issue revolved around the ESC's intention (in the (2006-10 price review) to move to a different set of standards than had applied in the 2001-05 period. Appendix 1 provides a very simple diagram to illustrate the propositions which we present in the following sections.

UED sees it as appropriate, from time to time, that performance standards, and regulatory incentive weightings may be changed to reflect up to date expectations, or rectify what may later be deemed to be inappropriate values. Unfortunately, the ESC Scheme has the effect of either locking in these parameters forever, or creating unintended consequences when they are varied.

7.3.1 UED historical performance

Figure 7.1 – UED's Performance During the 2001- 05 Regulatory Period



The above figure shows that UED delivered substantial improvements in performance historically, over and above the tightening performance targets set by the ESC. It should be noted, in particular, that UED delivered better service performance early in the regulatory period, and maintained this improved performance. Ostensibly, the financial incentives that UED believed were inherent in the original S-factor scheme had worked.

On the basis of good historic performance, UED expected that in future it would not suffer any penalties, provided that it continued to meet the Commission's future performance targets. This seems to be consistent with a 'common sense' view of how an S-factor scheme should operate.

UED's analysis, however, showed that the company would face substantial penalties over the forthcoming regulatory period (amounting to some $15 million) even if it

exactly met the ESC benchmarks in that period. This outcome was counter-intuitive, and in UED's view suggested that the mechanism was not working as intended.

Further analysis showed that if UED's current 2005 performance matched the company's record performance in 2004, rather that matching the ESC target (all other things being equal) the situation for the company would be even worse in the next regulatory period. The company would pay $53.7m in penalties. The fact that improvements in performance for only one year - with all other assumptions being held constant - would result in such penalties, highlighted that the scheme had some significant anomalies.

These outcomes led UED to examine more closely the original design intentions of the S-factor scheme, and to explore the mathematics that defined its operation.

7.3.2 Understanding the Problems with the S-factor

UED discerned that the anomalies with the proposed scheme were driven by the following issues and characteristics:

1 The "lagging penalty" in the s-factor formula;

2 Businesses were penalised for delivering early against declining targets (a special case of the impact the lagging penalty can have);

3 The Scheme did not recognise the targets set by the Commission;

4 The effect of increasing incentive factors "mid stream";

5 The effect of changing the measurement and exclusion processes.

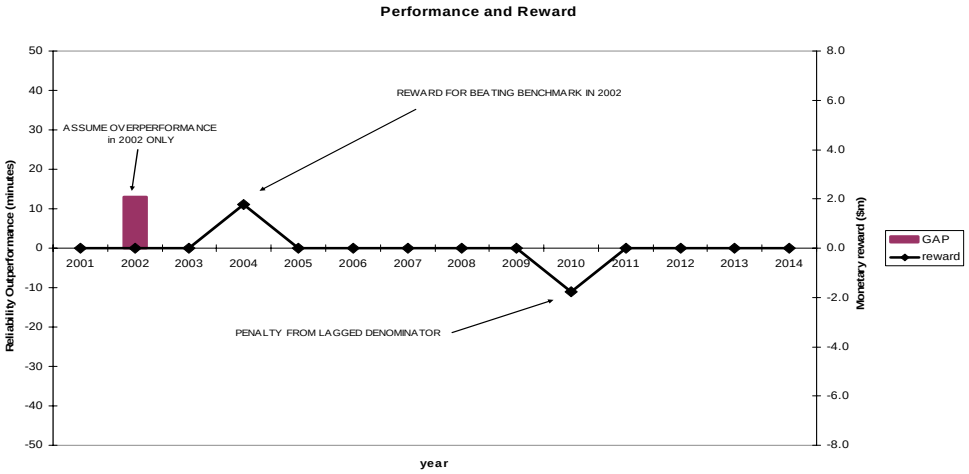
The combination of the above factors resulted in a major transitional problem.

Issues 1 and 4 above were flaws with the specific S-factor formula proposed by the ESC (being the lagged penalty and effect of changing the incentive rates mid stream.) If these two aspects had been corrected, then the other problems / issues should have fallen away.

7.3.3 Lagged Penalty

In simple terms, the lagged penalty relates to reliability performance in a particular year driving the value of the S-factor – and hence the level of reward or penalty – 8 years later. This is depicted in a very simple and stylised example below. One year's favourable performance drives a reward 2 years hence, and generates a penalty 6 years after that.

Figure 7.2 - Effect of Lagged Penalty Based on Hypothetical "Delta" Performance



It is noted that the penalty in the example above occurs some 8 years after the year of good performance. After eight years, it is unlikely that any DNSP management would realise the impending impact of the scheme.

Whilst the mechanism above may seem simple and predictable from the stylised example given, real world examples are never as simple or predictable as the above.

UED would query the purpose of providing a business with a bonus for out-performance in the current period, only to apply a penalty 6 years later. UED was aware of an argument that the ESC formula had been in place since 2000 and so could not be changed, since to do so would amount to retrospective regulation. But this has to be balanced against the obviously counter-intuitive outcomes.

Despite the odd timing of bonus and penalty payments under the ESC scheme, UED considers that it does actually create appropriate performance incentives, providing that the following conditions are met:

a. The regulator commits to "flat" target rates for all future regulatory periods;

b. The regulator commits not to revisit the agreed targets, even if actual performance systematically deviates from the target rates

While these conditions may appear to be restrictive, UED submitted without them the Commission's proposed scheme could not work as intended. It is only the potential for a company to receive annual rewards in perpetuity that give rise to the need for a lagged penalty to curtail these rewards after 6 years.

The alternative, and perhaps more realistic, situation is where the above conditions are relaxed, allowing that the regulator may reduce the targets over time to reflect actual performance, In this case, rewards will be curtailed once the targets are adjusted to reflect actual performance. In this sense, the adjustment to targets fulfils the intended role of the lagged penalty.

But if the regulator does adjust the targets to reflect actual performance, and still imposes the lagged penalty, then it is making an error: It is "double dipping". The "perpetual reward" is curtailed once through the adjustment to targets and then again through the lagged penalty. What would have been a justifiable mechanism to curtail rewards instead becomes a mechanism that perversely penalises improved performance.

The analysis above reveals that there is actually a choice between two self-consistent arrangements:

i. A scheme with fixed targets and a lagged penalty; or

ii. A scheme with adjustable targets and no lagged penalty.

7.3.4 Delivering Early on Declining Targets

Figure 7.3 – Effect of Lagged Penalty Based on UED's Actual Performance

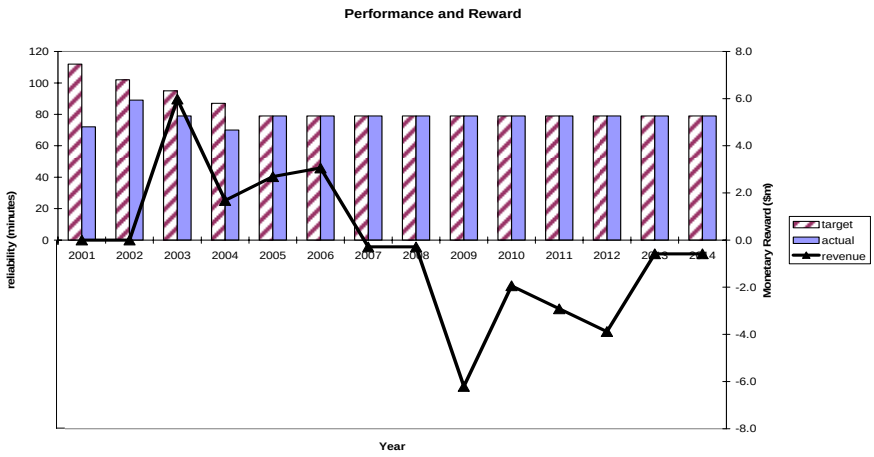


Figure 7.3 above illustrates the effect of the lagged penalty for UED. Because UED had over-performed over the period 2001 - 2004, the lagged penalty caused UED then to be penalised from 2009 - 2012. Note that in Figure 7.3 it is assumed that UED performance is exactly on target for the full period 2005 - 2014, so the penalties arising have nothing to do with future performance; they are, purely and simply, penalties for historical over-performance.

UED delivered performance improvements earlier than required and relative to a declining target. Customers benefited from this, and the good performance had not been followed by anything that could be classified as "bad" and worthy of a penalty.

However UED was being required to pay a penalty. It was seen earlier that the penalty that UED would have to pay far exceeded the reward that the company had received. The conclusion is that UED would have been better off if the company had never delivered any improvements in the first place, and simply delivered performance in accordance with the target in each year. However, customers would be obviously be worse off.

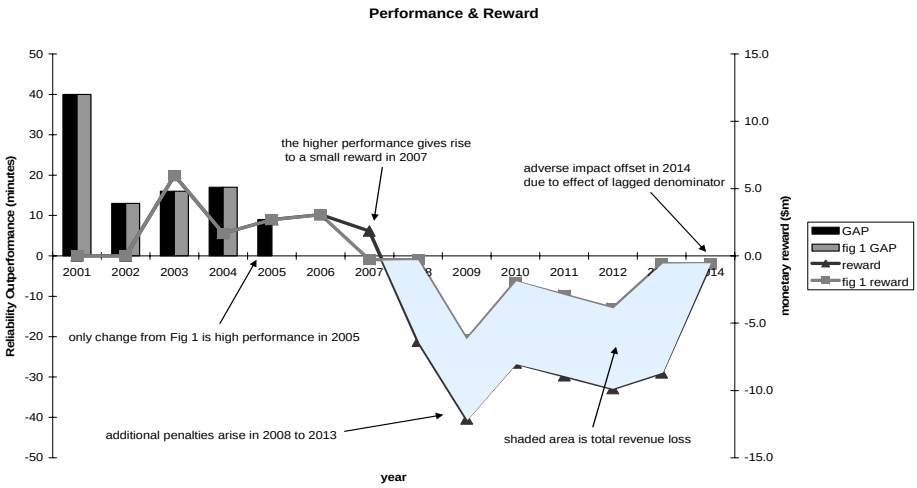
7.3.5 The Scheme does not Recognise the Performance Targets set by the Commission

The stepped change in the incentive factors in the scheme by the ESC in 2006 inadvertently established 2005 as a major benchmark year. UED understood that the scheme was intended to be continuous - flowing from one year to the next. The change to the incentive factors had the effect of establishing 2005 actual performance as benchmarks which then had to be sustained by the company. This outcome was not foreshadowed by the regulator, and UED believes that it was not intended.

7.3.6 The Effect of Increasing Incentive Factors "Mid - stream"

Figure 7.4 below shows how, compared to the above Figure 7.3 scenario, an improvement in reliability in 2005 only (all other parameters being equal) causes substantial revenue penalties to occur over the period 2008 - 2013. As a result of outperforming the 2005 reliability benchmark, UED was to be penalised a total of $36m over this period – shown by the shaded area in Figure 7.4.

Figure 7.4 – Effect of Higher Reliability Performance in 2005



In this example, over-performance in a year (in this case 2005) causes UED to be penalised in future years (2008 - 2013). This outcome also appears to be inconsistent with the principles underpinning the S-factor scheme.

The reason for this outcome is an anomaly in the algebraic formula for the S-factor with the current algebra not being designed to handle changes to the incentive scheme. *The error means that any over-performance exactly 3 years prior to an increase in incentive factors gives rise to a penalty, whereas an under-performance in that year gives rise to a reward*.

This point illustrates the importance of the ESC honouring the reliability targets, rather than basing the S-factor scheme on UED's actual performance.

7.3.7 Summing up - way forward

UED reiterates that it supports the concept of the S-factor scheme, providing that the scheme operates in accordance with the original design principles set out by a regulator and understood by industry participants. In this section, UED has illustrated that the expected outcomes from the operation of the S-factor scheme can be counter-intuitive and inconsistent with the design principles and good incentive regulation.

7.4 Other issues with STPIS

7.4.1 Revenue at risk

The AER scheme (s 2.4) establishes maximum revenue at risk (excluding GSL) of three per cent but will allow DNSPs the opportunity to vary this rate where it satisfies the objectives of the scheme. This would allow businesses to develop network specific proposals. UED agrees with the AER's 'safe harbour' approach of setting the 3% as a maximum, with lower percentages of revenue at risk for particular customer service parameters.

7.4.2 Exclusions

The list of exclusions in the scheme (s 3.3) covers major event days (as defined) and specified load interruptions. UED considers that this list should be expanded to include interruptions under directions from police and other authorities, directions from NEMMCO and automatic under-frequency load shedding.

7.4.3 Planned interruptions

UED notes that the reliability component of the STPIS set out in s 3 and defined in Appendix A does distinguish between planned and unplanned interruptions on the grounds that:[16]

- DNSPs should have an incentive to manage both types;
- Planned interruptions make up a small part of total interruptions.

UED disagrees with the proposed approach of treating planned interruptions in the same way as unplanned interruptions for the purpose of the incentive scheme.

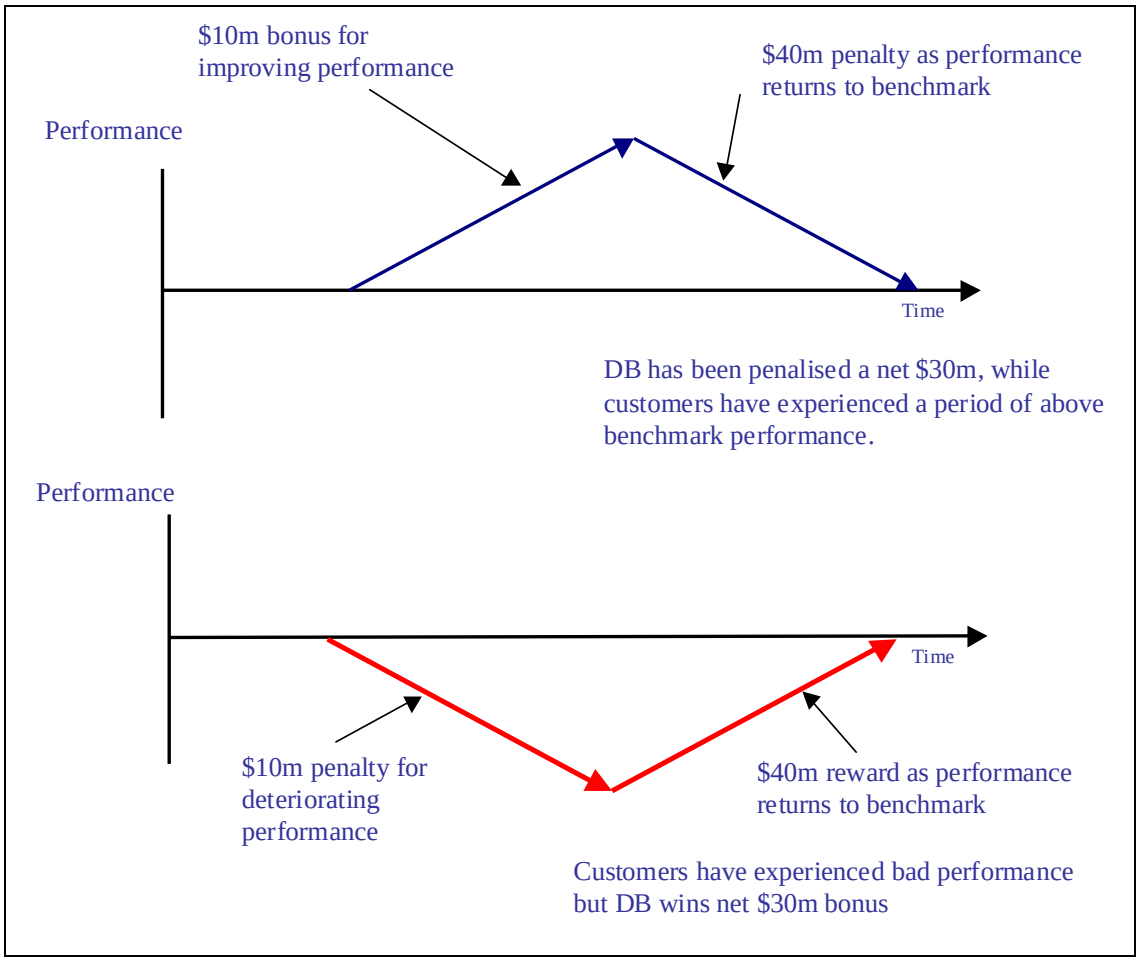
First, including planned interruptions within the service target performance incentive scheme is inconsistent with maximising incentives to maintain the network and there are potential disincentives created for network safety. UED notes that the AER's proposed approach did operate for a time in Victoria, but was subsequently abandoned as its adverse impacts issues were recognised by both distributors and the Commission. .

The inclusion of planned interruptions is also theoretically questionable – there is a presumption that customers are indifferent between planned outages (fixed time

[16] STPIS Discussion Paper p 17

interruptions with given notice) and unplanned outages, which are episodic and of varying duration. UED is unaware of any evidence to support this presumption, which ignores customers' capacity to avoid or shift components of their electricity usage.

APPENDIX 1: HOW THE VICTORIAN SCHEME PENALISED GOOD PERFORMERS



Appendix 2 – Working principles for guidelines

UED's proposed 'working principles' for the guidelines were[17]:

1. Distinguish between matters required to be dealt with primarily in a price determination and general matters that can be left to guidelines;
2. Produce guidelines which are complete in themselves;
3. Produce incentive schemes which are to the maximum extent possible simple and effective, and which do not seek to over-elaborate the regulatory framework;
4. Take a realistic view of what can be effectively implemented by guidelines in the short term;
5. Note matters for future guidelines which require further development and consultation;
6. Not adopt consistency for consistency's sake to the extent that it compromises other objectives;
7. Recognise that previous commitments (explicit or implicit)that impact on recovery of costs/revenue that have been created through previous regulatory treatments need to be honoured into the future (eg customer contributions and tax);
8. Recognise that differences in matters such as geographic areas and customer bases give rise to different histories and needs of distributors and that therefore an appropriate service incentive mechanism for each distributor will vary according to its circumstances.

[17] UED submission 4 February 2008, section 2