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Your Reference:
Our Reference: UE-SU-01

Mr Chris Pattas
General Manager, Network South Branch
Australian Energy Regulator
GPO Box 520
Melbourne VICTORIA 3001

BY EMAIL TO: Chris.Pattas@aer.gov.au

Dear Mr Pattas,

Re: Connection charge guidelines for accessing the electricity distribution network. Issues and AER's preliminary positions

United Energy appreciates being provided with an opportunity to respond to the AER's consultation paper on connection charge guidelines for accessing the electricity distribution network. The submission by United Energy is attached to this letter.

Should you or your staff have any queries in relation to this response, please do not hesitate to contact Jeremy Rothfield, Regulatory Economist, on (03) 8846 9854.

Yours sincerely

Andrew Schille
Regulatory Manager

Enclosures.

UNITED ENERGY
Distribution

Response to AER’s Consultation paper: Issues and AER's preliminary positions - connection charge guideline for accessing the electricity distribution network

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Revision Log

Rev	Revision Status	Date	Prepared by:	Checked	Authorised
A	Preliminary	01/08/2011	Rohan Harris		
B	Final	05/08/2011	Jeremy Rothfield		

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1. Executive Summary

The Ministerial Council on Energy (MCE) has endorsed the introduction of a new chapter 5A —Electricity connection for retail customers — to the National Electricity Rules (NER). Under Chapter 5A, the AER will be required to develop and publish connection charge guidelines to codify how Electricity Distribution Network Service Providers (DNSPs) should charge new electricity customers for connecting to their networks.

In support of this, the AER has released a Consultation paper: "*Issues and AER's preliminary positions - connection charge guideline for accessing the electricity distribution network*", which outlines the AER's preliminary position in relation to the methodology that should be used by businesses to calculate connection charges in the future.

The key component of this methodology is the adoption of a cost-revenue test (also commonly known as incremental revenue less incremental cost test) as part of the broader connection charging methodology.

After considering the detailed aspects of the AER's Preliminary Position Paper, United Energy's believes that the AER's proposed cost-revenue test is inconsistent with the National Electricity Rules (NER), and moreover, the National Electricity Objective (NEO) outlined in the National Electricity Law (NEL). In particular, the adoption of a cost-revenue test:

- Fails to have regard for the fact that businesses must set variable prices that reflect the incremental cost of providing services to customers under the NER Pricing Principles and the NEO (which focuses on "efficient use" of electricity services). Therefore, where a customer develops in-sequence[1], the incremental variable revenue received from that customer should equate to the incremental costs of providing shared network services and operating and maintenance services to that customer, thus negating the need to include either component in the cost revenue test. Further, these incremental costs are most appropriately signalled through on-going variable charges, not upfront developer charges; and

- Over and above the aforementioned inconsistency with the NER and the NEO, the inclusion of all revenue in the AER's cost-revenue test can, in many cases, lead to incremental revenue exceeding incremental cost, which in turn means the customer faces a zero customer contribution. When this occurs, the connecting customer has no financial incentive to minimise his overall connection costs, having regard to the relative opportunity cost of adopting different location and connection sizing solutions. This is because any changes made by the connecting customer would not lead to a reduction in his customer contribution – because it is already zero. Therefore, the cost revenue test cannot be considered as promoting efficient investment in electricity services, as required by the NEO, when some customers (in the

[1] A connection that United Energy could reasonably be expected to cope with in the ordinary course of managing its distribution network, given the timing, location and size of that connection.

case of United Energy, the majority of business supply customers) face a zero dollar customer connection charge.

United Energy considers that for the proposed methodology to be consistent with the NER, and the NEO, the methodology should provide for the removal of all incremental revenue, and thus prescribe that charges be based purely on the incremental cost of connecting a new customer. More specifically, this charge would be made up of:

- The direct incremental costs of connecting that customer to the distribution business' existing shared network; and

- The incremental cost associated with bringing forward the construction of the shared network, if that connection is deemed to be out-of-sequence (i.e., a connection that is inconsistent with the timing, location or size that United Energy could reasonably be expected to cope with in the ordinary course of managing its distribution network).

United Energy considers that its proposed approach would also be cheaper and simpler to administer; much more transparent to the end customer; and it would lead to connection charges that are much less likely to be materially influenced by small changes in the assumptions contained within the model.

Finally, United Energy considers that there are a number of other aspects of the AER's Preliminary Positions Paper that may lead to inefficient outcomes occurring. These are:

- If the cost-revenue test is maintained, the AER's proposal to exclude services that have been provided by third parties from the cost-revenue test will have a significant impact on the extent of competition in the industry; the amount of connection work having to be undertaken by United Energy internally; and the timeframe required to complete connections on average. United Energy notes that this issue will dissipate if the company's proposed approach to charging new customer connections is adopted; and

- The threshold for tendering out should be revised to reflect the fact that for such an approach to be economically efficient, the threshold must, as a minimum, be at least as high as the cost of tendering those services out in the first place. United Energy does not consider that the AER's proposed threshold of $3000 is consistent with this requirement. Furthermore, a preferable option is that the cost of tendering is actually charged to the customer seeking the tendering arrangements – this would ensure that an appropriate price signal is sent to customers, so that they are incentivised to weigh up the likely benefits of commencing a tendering process versus the costs of that process; and

- The imposition of a Pioneer Scheme should have regard to the net benefits to the customers of each individual business. In United Energy's case, despite such a scheme having been available for over a decade, there has been no take up of the available offers over the past 10 years. This reflects the mainly urban nature of United Energy's region – where development is predominately in-fill development. United Energy notes that there may be significant

administrative and system costs to implement a system[2], which should be considered in light of the likely limited benefits to United Energy's customer base.

2. Background

The Ministerial Council on Energy (MCE) has endorsed the introduction of a new chapter 5A —Electricity connection for retail customers — to the National Electricity Rules (NER). Under Chapter 5A, the AER will be required to develop and publish connection charge guidelines to codify how Electricity Distribution Network Service Providers (DNSPs) should charge new electricity customers for connecting to their networks.

DNSPs will be required to develop their connection policies for approval by the AER based on the guideline. The connection policies must set out the circumstances in which connection charges are payable and the basis for determining the amount of these charges.

The AER' has stated in the summary section of its Preliminary Positions Paper that:

"The principles of how DNSPs may charge for connection services and the matters that the AER must have regard to in developing the connection charge guidelines are set out in chapter 5A. The key principles include (1) DNSPs may charge reasonable capital contribution towards the cost of the extending the networks to provide the connection services; and (2) for customers with capacity higher than a threshold set by the AER, DNSPs may also charge for specific augmentation cost towards the cost for increasing the capacity of the existing network (upstream cost) because of new customer demand."

The AER's design principles are:

- *Where possible, the connection charge should be reflective of the actual cost for providing the network extension attributed to the individual customers;*
- *Where suitable alternative service providers for construction works are available, the DNSP's charge should be reflective of the market price; where no alternative service providers are available, DNSP's must charge at a reasonable rate, which is reflective of the market price;*
- *Any cross subsidies between new and existing customers should be minimised. However, minimising cross subsidies should not be pursued at the expense of undue administrative costs; and*
- *Customers should not experience a large step change in capital contributions if they fall above or below the threshold for charging for augmentation*.

[2] Despite such a scheme being available, United Energy does not currently have a system in place to track connections, or rebates required, because of the absence of requests for Pioneer Schemes from customers.

Broadly, the key aspect of the AER's approach is the adoption of a 'cost-revenue test', or what is more commonly referred to as incremental revenue less incremental cost test. This means that if the cost to connect a new customer exceeds the distribution network tariff revenue collected over the evaluation period, the customer should pay for the shortfall. Conversely, if incremental revenue is greater than incremental cost, then the customer pays no customer contribution – although the AER also specifically notes that the distribution business is not liable for the payment of any monies to the connecting customer in this circumstance.

The charging formula is as follows[3]:

> CC = ICCS + ICSN – IR(n=X)
>
> Where:
>
> CC = Capital Contribution
>
> ICCS = Customer specific incremental costs incurred by the DNSP
>
> ICSN = Incremental costs in the upstream (shared) network directly attributable to the new connection, where applicable
>
> IR(n=X) = Present value of an X year revenue stream directly attributable to the new connection
>
> The AER considers it appropriate that an additional constraint be placed on this formula that CC ≥ 0.

The AER's proposed approach is broadly similar to the current Victorian approach that is expounded in Guideline 14.

Furthermore, a threshold arrangement has been proposed, whereby customers with a peak demand below a certain threshold – the AER's preliminary position is that this should be less than 100 Amperes 3-phase low voltage - will not pay for the specific shared network augmentation charges. The AER comments further in a footnote on page vii that this is because:

> *"The cost of shared network augmentation for general demand growth is already shared amongst all customers, new and existing. The shared network augmentation cost of customers below the threshold will be treated in a similar manner."*

Furthermore, the new Chapter 5A explicitly notes that:

> *"In general, the intention is to exclude deep system augmentation charges for retail customers ".*

United Energy notes a number of other key components of the AER's approach, namely:

- There are two "types" of connecting customers – a "retail customer" and a "real estate" developer - with one treated differently from the other. More specifically, the former is subject to the application of the previously mentioned

[3] Australian Energy Regulator, Issues and AER's preliminary positions: Connection charge guidelines: for accessing the electricity distribution network, 10 June 2011, Page 4.

capacity threshold test, so that if their demand/energy is assessed as being below the threshold, then the distribution business must not include a shared network component in the connection charge. Conversely, the "real estate" developer is not subject to the threshold test, and has to automatically pay a contribution towards the costs of augmentation. No capital contribution in respect of augmentation will be required if augmentation does not need to be done;

- A Pioneer Scheme is proposed to apply where "*a connection asset ceases, within 7 years after its construction or installation, to be dedicated to the exclusive use of the retail customer occupying particular premises*"; and

- The AER's Preliminary Position Paper takes the position that when an asset can be provided by a third party (i.e., when developers obtain on site LV works from third parties, and then donate those assets to United Energy), that cost should also be excluded from the cost-revenue test calculation.

United Energy's proposal seeks to comment on each of aforementioned key aspects of the AER's proposed approach.

3. Overview of Submission

The remainder of this submission discusses United Energy's:

- View as to what the AER's cost-revenue test actually does;
- Review of the AER's proposed design criteria, and moreover, what it considers the overarching objectives for setting customer contributions should be;
- Key concerns with the AER's Preliminary Position Paper;
- Proposed changes to the cost-revenue test; and
- Position on a number of other supplementary issues.

Further, United Energy has provided detailed responses to each of the questions asked in the Position Paper, in an Appendix to this submission.

4. What does the cost-revenue test actually do?

Before critiquing the AER's proposed cost-revenue test, it is prudent to dissect exactly what the cost-revenue test is actually doing, from a cashflow perspective. This helps to understand the implications associated with its adoption, relative to other possible alternative pricing methodologies.

In short, United Energy considers that the AER's cost-revenue test is an NPV analysis that compares the incremental standing charge and variable charge revenue from an individual customer over a set evaluation period (30 years for residential; 15 years for business supply), against the total incremental costs associated with the upfront connection costs associated with connecting that customer, the on-going operating costs associated with serving that customer, and the costs of providing that customer with shared network services.

At the level of the basic construct, United Energy postulates that what is actually happening in the test in all cases is that the distribution business is giving a discount to a connecting customer on their upfront connection costs, in return for getting 'access' to their standing charge and variable charge revenue stream over the

expected life (30 years for residential and 15 years for business supply customers) of that connection.

In effect, there are two outcomes associated with this:

- Where a customer's incremental revenue over the evaluation period exceeds their incremental costs, that customer does not have to pay an additional customer contribution, and therefore, they receive a 100% discount on the connection costs (i.e., the customer gets their connection for free, in return for access to their standing and variable charge revenue over the life of the connection); or

- Where a customer's incremental revenue doesn't exceed their incremental cost, then they have to make a further customer contribution, however, in virtually all cases, a connecting customer will receiving a discount on their connection cost (i.e., the customer contribution will be less than the upfront cost of connecting that customer).

United Energy notes that from a commercial perspective, this 'discount' on the up-front costs of connecting the customer might be fine, however, from an economic perspective, there may be potentially significant issues associated with the adoption of such a discounting practice. These issues are discussed in more detail in latter sections of this report.

5. A Review of the AER's design criteria

The AER has adopted a number of design criteria on matters where chapter 5A only sets the general principles rather than specific conditions. These have been designed to inform the AER on the appropriate charging approach to meet Chapter 5A objectives. The AER' design criteria are[4]:

- *Where possible, the connection charge should be reflective of the actual cost for providing the network extension attributed to the individual customers;*
- *Where suitable alternative service providers for construction works are available, the DNSP's charge should be reflective of the market price; where no alternative service providers are available, DNSP's must charge at a reasonable rate, which is reflective of the market price;*
- *Any cross subsidies between new and existing customers should be minimised. However, minimising cross subsidies should not be pursued at the expense of undue administrative costs; and*
- *Customers should not experience a large step change in capital contributions if they fall above or below the threshold for charging for augmentation*.

United Energy's main observation on the design criteria is not so much on what is in there, but what is not in there. In particular, there is nothing there that explicitly reflects the fact that the AER's overarching objective should be to "*promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers*". Whilst it could be argued that as this is the National Electricity Objective, this already guides every decision the AER makes and therefore does not need to be explicitly identified as a design criterion, United Energy considers that this should be a specific design criterion referenced by the AER, particularly as it appears that other design criteria, for example, "*any cross subsidies between new and existing customers should be minimised"* have been the focus of the AER, with a resulting reduction in emphasis on the achievement of the overarching NEO.

Picking up on this point, United Energy considers that there are a number of other more detailed design objectives that are a pre-requisite to the development of a customer connections' charging framework that is consistent with the achievement of the broader NEO. United Energy considers that the AER should have explicit regard to these objectives when reviewing their Preliminary Position. These are:

1. Incentives to minimise connection costs: Customers should have a financial incentive to minimise the overall cost of connecting to the DNSP's existing distribution network, having regard to the opportunity cost of seeking a connection at a different location and /or of a different capacity. This is a pre-

[4] Australian Energy Regulator, Issues and AER's preliminary positions: Connection charge guidelines: for accessing the electricity distribution network, 10 June 2011, Page vi.

requisite to the '*promotion of efficient investment in electricity services… for the long term interests of consumers*'.

2. Location based price signals: Customers should have a financial incentive to connect in areas of the DNSP's network that have spare capacity. Admittedly, though, the costs that developers might incur when establishing connections to essential services should not be the principal influence on planning decisions.

3. Timing of development: Customer's should have a financial incentive to connect in-sequence. Put another way, they should be financially penalised for connecting in areas that are demonstrably inconsistent with what is the logical (from an economic perspective) sequence of development. This is also linked backed to the previous objective re: connecting in areas that have spare capacity.

4. Skew incentives to engage third party providers: The method by which a customer's connection charge is calculated should not inappropriately incentivise them to choose one particular service provider (a third party) over another (the DNSP), just because of the impact that that decision has on their overall customer connection charge.

5. Administrative costs / ease of understanding: Customer's should expect to be able to easily understand how their customer connection charge has been established, and it should not be subject to significant fluctuation based on small changes in individual parameters. Further, the administrative costs associated with any pricing framework should be minimised, having regard to the allocative efficiency benefits of sending more cost reflective price signals.

These objectives, which United Energy considers are consistent with a customer connections charging framework that is consistent with the NEO, have been implicitly adopted in the next section of this report to critique the AER's proposed Preliminary Position.

6. Key Issues with the AER's Preliminary Position Paper

United Energy considers there to be four fundamental deficiencies with the AER's Preliminary Position Paper, namely:

1. It is inconsistent with conventional economic appraisal techniques and the NER itself, a by-product of which is that the approach does not provide the customer with a financial incentive to connect 'in-sequence';

2. It many cases, it does not provide a connecting customer with a financial incentive to minimise their overall connection costs, having regard to the relative opportunity cost of adopting different location and connection sizing solutions;

3. The economic grounds that the AER uses to underpin the cost-revenue test are incorrect; and

4. The basis for excluding negotiated services will have a significant impact on the extent of competition in the industry and the amount of connection work having to be undertaken by United Energy internally.

These are discussed in turn in the following sections.

6.1 Consistency with Conventional Economic Appraisal Techniques

United Energy's initial view is that despite the fact that the cost-revenue test approach is adopted in a number of jurisdictions to calculate electricity customer contributions, there appears, in our view at least, some disconnect between this approach, and conventional economic theory and the requirements of the NER.

In particular, United Energy notes that DNSP's have to develop a Business As Usual (BAU) capital expenditure forecast to support an expected development/connection plan for two reasons:

- Regulatory Submissions: A business' BAU augmentation related capital expenditure forecast is fundamental to its Regulatory Submission. This is why Consultants are sent in to review business' demand forecasts, because they drive augmentation Capex forecasts; and

- LRMC estimates to establish variable prices for distribution services: The BAU augmentation Capex program underpins the business' LRMC estimate, which in turn is required by the NER (clause 6.18.5 "Pricing principles") to support the derivation of variable prices that will be levied upon all customers. Moreover, the achievement of the NEO requires the promotion of "*efficient….. use of, electricity services*", which is predicated on the achievement of allocatively efficient outcomes, requires the levying of cost reflective variable prices.

Therefore, in summary, the BAU augmentation related capex forecast is developed based on expected demand/energy forecasts given know circumstances at the time; and this BAU Capex forecast, and the underlying demand forecasts, underpin the

LRMC calculation that is required for setting variable prices under the NER and the NEO.

Having regard to the above discussion, United Energy considers that the AER's proposed methodology fails to have regard for the fact that businesses must set variable prices that reflect the incremental cost of providing services to customers under the NER Pricing Principles and the NEO (which focuses on "efficient use" of electricity services). Therefore, where a customer develops in-sequence, the incremental variable revenue received from that customer should equate to the incremental costs of providing incremental shared network services and operating and maintenance services to that customer[5], thus negating the need to include either component in the cost revenue test.

The AER's proposed approach includes both variables for all customers who are above a certain, yet to be defined, threshold, which is unnecessary; further, they include revenues, but exclude the corresponding costs, for customer's that are below the threshold, which is even more inconsistent with the underlying pricing principles of the NER and the NEO.

Following on from the above, it is only where a customer connects out-of-sequence (i.e., a connection that is inconsistent with the timing, location or size that United Energy could reasonably be expected to cope with in the ordinary course of managing its distribution network) where it will, in theory, impose a cost on United Energy that is not otherwise already captured by the variable charge that is levied upon that customer. Therefore, it is out-of-sequence development that should be subject to the bring-forward costs of the shared network.

United Energy Proposal:

- Neither the incremental variable revenue, not the incremental costs that it recovers, should be in the calculation in theory, given that the NERs require that variable prices reflect the LRMC of supply anyway.
- The incremental cost associated with bringing forward the construction of the shared network should be able to be charged to certain customers, if that connection is deemed to be out-of-sequence.

6.2 Inconsistency with promoting least cost provision of electricity services

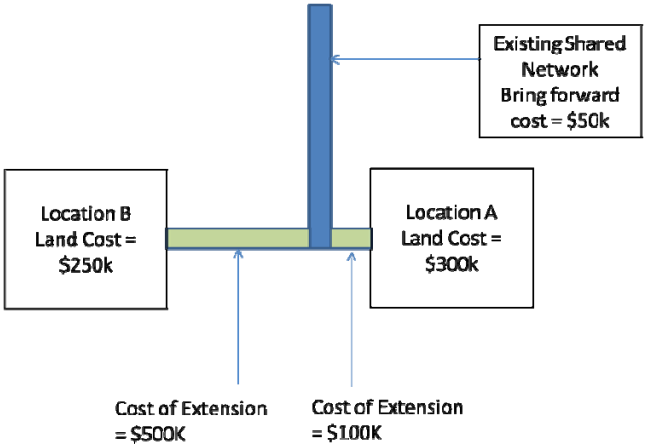
United Energy considers that the AER's approach is inconsistent with the objective of promoting efficient investment in the electricity distribution network, which is a requirement of the NEO.

[5] Mathematically, the average incremental cost approach to calculating the LRMC involves calculating the NPV of growth related capex and opex (i.e., the forward looking incremental costs), and dividing by the NPV in growth in the underlying driver of that cost (e.g., demand). If the LRMC that is obtained from this calculation is then applied as a price to the growth rate in the underlying cost driver over the evaluation period, it generates a stream of revenues that in NPV terms, equals the NPV of the incremental cost (i.e., the business is financially neutral)

United Energy's argument is particularly relevant to those situations where a connecting customer's incremental revenue is greater than their incremental cost, therefore leading to them paying a zero customer contribution.

In short, United Energy considers that when a customer is faced with a zero customer connection charge (because their incremental revenue is greater than their incremental cost under the AER's proposed methodology), they will have no financial incentive to make an efficient connection sizing or location decision. The following, simple scenario, is used to illustrate this issue.

Figure 1: Example of Issues that may stem from merging upfront and on-going charges



In this simple example, an industrial customer has the choice of locating its factory at one of two possible locations - (A) and (B). The land at Location A is more expensive, at $300k, than location B, at $250k, however the cost of extending the electricity network to service those parcels of land are different as well, with Location A being $100k and Location B being $500k. Assuming that everything else is equal (e.g., they have the same expected demand and energy throughput requirements, therefore they have the same impact on shared network and the distribution business is assumed to generate the same revenue from that connecting customer no matter where it is located), the most efficient outcome for the community is for the customer to locate at location A, despite if having a higher cost of land. This is because the higher opportunity cost of providing land to that customer ($300k versus $250K) is more than offset by the lower cost of providing electricity services to that customer at that location ($500K versus $100k).

However, what would be the customer's locational decision when faced with a customer contribution that has been calculated using the AER's proposed approach:

- If incremental revenue is greater than the incremental cost under both scenarios (locations), then there is in fact a perverse incentive for the customer to locate in the area that has the higher cost to serve, as the customer can internalise the lower land value, but is not faced with trading this lower land value off against the higher cost of providing electricity services (because their customer contribution is zero in both cases because incremental revenue is greater than incremental cost);

- If the incremental cost is greater than the incremental revenue when assessing the cost of connecting to location B (the one with the $500k connection cost),

but this difference (which is effectively the customer contribution that is calculated under the AER's proposed approach) is less than the difference between the land values of the two locations ($50k), then again, inefficient locational signals are provided, as the customer would still have a financial incentive to choose the location with the cheaper land value because it can reap the financial benefit of the lower land value whilst only paying a small portion (less than the difference in the two land values) of the increased costs of providing electricity to that location; and

- If the incremental cost is greater than the incremental revenue, and this is greater than the difference in the cost of the two parcels of land, then the customer would choose to locate at Location A, and incur the higher land purchase costs and receive the lower customer contribution.

This is a very simple example, but it illustrates that when incremental revenue is at the core of the calculation of the customer contribution, and incremental revenue is greater than or close to the incremental cost, connecting customers do not face the full cost to society of providing them with electricity services, which means that they cannot internalise that cost, and weigh it up against the other incremental costs/benefits of choosing various different locations. It is also noted that the requirement to use the 'lowest cost technically acceptable' (LCTA) asset is irrelevant in this case, because this occurs after the location, timing and sizing decisions have been made by the customer.

Taking this even further, consider the incentive for the business to adopt upfront on-site measures to reduce its demand on the distribution network. In particular, let us revert back to the example outlined previously. Assume the customer connecting in Location B ($500k of connection assets) has the choice of:

- Having $500k of connection assets constructed and included in their customer contribution, based on an expected 500KVA load; or

- Having $250k of extension assets constructed and included in their customer contribution, if they spend $150k upfront on on-site energy efficiency options to reduce their expected demand to 300KVA.

If, even after the inclusion of the $500k worth of connection assets in the customer contribution, incremental revenue is greater than the incremental cost of supply, there will be no incentive to adopt up-front measures (i.e., at the construction stage) to reduce their demand and therefore connection size, because any cost incurred by the business in doing this does not actually lead to a lower customer contribution (because they are not paying a contribution in the first place). Therefore, they are not incentivised to weigh up the incremental connection costs of certain sizing options versus the incremental costs of on-site changes to their production processes. Further, the DNSP is in no position (and neither should it be) to assess whether the connecting customer has done all that it could to reduce its load on the network, having regard to the relative costs of on-site works versus the cost of providing connections assets of a certain capacity.

It is further noted that in this scenario, incentivising the customer to adopt on-site energy efficiency options once it has connected to the network is not the most efficient outcome, even if it is in response to an LRMC (cost reflective) based variable price. This is because the connection asset is, by that stage, sunk, and therefore, it was over-sized, relative to the efficient servicing solution (a mixture of on-site demand management, and a smaller connection asset).

Further, United Energy notes that this scenario – where incremental revenue is greater than incremental cost – happens in the majority of instances involving supply to businesses (and has been estimated to be the case in about 70% of business connection projects, based on recent data). Further, United Energy notes that even if the AER were to allow for prices to remain at constant levels beyond the first 5 years of the evaluation period (as is proposed in their Preliminary Position Paper), a significant portion of customers – particularly business supply customers - will still face a zero customer contribution, therefore, muting their incentive to adopt a least cost connection sizing and location decision.

Finally, United Energy notes one further qualitative issue that may increase the likelihood of incremental revenue being greater than incremental costs in many cases in the future. This pertains to the fact that recent network pricing decisions have led to modest price rises, and United Energy observes that these price rises have not just been driven by increases in augmentation costs and other costs that are a function of the amount of energy throughput, demand or the number of customers connected to their network. Rather, they have also been affected by the increased costs associated with replacing ageing assets and the cost of complying with more stringent regulations, amongst other things.

As discussed previously, variable prices should equate to the incremental cost of providing energy/demand services (i.e., LRMC). Therefore, any price rise that is not driven by increased consumption of energy/demand should be manifested in a higher fixed (standing) charge. Therefore, because costs are increasing as a result of factors that are not directly related to that customer connection (e.g., replacement programs, safety programs, other regulatory changes), there is a greater likelihood that incremental revenue will exceed incremental costs in the model in the future, thereby further attenuating the extent of customer contributions.

United Energy Proposal:

The AER's proposed methodology cannot ensure that efficient outcomes are achieved, given the likelihood that many connecting customers will have an incremental revenue that is greater than incremental cost, and therefore, be faced with a zero customer contribution. In this scenario, inefficient location and connection sizing decisions can ensue. This is clearly inconsistent with the NEO, in particular, it does not promote efficient investment in energy services for the long term interests of the consumers of energy.

6.3 AER's stated economic rationale is flawed

Following on from the above discussion, the AER appears to have premised its adoption of the cost-revenue test on two 'economic' arguments. These are:

- *"The AER considers that the cost-revenue-test is required to ensure customers are contributing at least their incremental costs"; and*
- *"A connecting customer's costs will be recovered as a combination of ongoing DUoS payments and upfront capital contribution…..the AER considers that it generally does not matter if connecting customers' costs are recovered upfront or as ongoing payments, so long as a mechanism is in place to ensure that a subsidy-free price is recovered by the DNSP".*

In relation to the first point, United notes the following issues:

- The revenue-cost test is not "required" to ensure customers pay at least their incremental costs, as the AER states; and

- The AER appears to conflate two quite separate economic arguments, namely, they appear to infer that because a DNSP is assured that it will recover at least incremental costs of connecting that customer over the life of the connection (i.e., that it is a subsidy free connection), the connection itself (e.g., sizing/location) must be efficient.

Firstly, it is self-evident that the inclusion of incremental revenue in the calculation is not a pre-requisite to ensuring that a customer at least pays their incremental cost – in fact, the alternative is to just simply calculate the incremental cost of connecting a customer, and charge this amount to the customer.

Secondly, United Energy refers the AER back to the example provided in the previous sub section, which illustrates that despite incremental revenue being greater than incremental cost over the life of the evaluation period (thus ensuring that that customer is contributing at least their incremental costs, and therefore, it is a 'subsidy free' connection), the customer would not in fact be provided with a financial incentive to adopt the most efficient servicing solution. Therefore, the AER's assertion that their proposed methodology results in customers paying *'at least their incremental costs*' ignores the most important economic concept, that is, that the connecting customer has a financial incentive to adopt the most efficient connection sizing and location decision, having regard to the relative opportunity cost of adopting different location and connection sizing solutions available to that customer.

With regards to the AER's second point - it "*does not matter if connecting customers' costs are recovered upfront or as ongoing payments*" – United Energy considers that AER has provided no theoretical basis, or framework, for making this statement. More broadly, it is contrary to all network pricing theory, which first and foremost, is concerned with sending the right marginal price signals for all services – noting that there are actually two services here (a connection service; then a usage service) - hence why the NER focuses on setting cost reflective variable prices based on LRMC. Exactly the same principle applies for network connections – that is, the connection cost itself should reflect the incremental cost to the DNSP of providing that connection at that time, at that location, so that the customer can make a decision that reflects their willingness to pay for that connection, relative to the cost to society of making that connection available. The absence of this, or the merging of upfront and forward looking costs, risks inefficient connection decisions being made (just like would occur if you were to recover some sunk fixed costs via a variable energy charge). This is clearly illustrated in the example outlined in the previous sub-section, where, because the incremental cost of connection is not clearly signalled to the connecting customer, they are not incentivised to adopt what is the least community cost solution for the provision of electricity services to them.

Notwithstanding the above, there are two valid reasons why a connection price might be allowed to deviate from the true marginal cost to society of providing that connection service. These are if:

- The demand for connection services is inelastic – that is, connecting customers are not responsive to changes in the price of that service; and/or

- The administrative costs associated with sending that cost reflective price signal are prohibitive, thus overwhelming the allocative efficiency benefits that might stem from sending that cost reflective price signal.

United Energy notes a statement made by the AER in a footnote that infers that they may have had at least some regard for these issues. They state that:

> *"DNSPs have suggested that upfront payment of costs provides a stronger locational signal to connecting parties. Therefore, a customer should generally pay upfront for its direct connection costs. Whilst this may be the case, the AER considers that for most small customer, direct connection costs will not vary substantially and hence a locational signal is not necessary. The AER has provided strong locational signals on, the more substantial, extension and augmentation costs. Also, where a customer's direct connection costs are higher than usual, for example when a customer requires a pole on private property, the cost will be included in a customer's revenue test possibly resulting in a capital contribution, thus providing a locational signal".*

United Energy makes a number of observations on this comment:

- It is unsubstantiated – that is, there is no evidence to suggest that the AER has done any analytical work to support the statement that "*the AER considers that for most small customers, direct connection costs will not vary substantially and hence a locational signal is not necessary*";

- Further, and more importantly, there is a distinct absence of discussion around business supply customers, and the impact of the AER's proposed approach on their behaviour;

- Further, if it was such that demand for connection services was totally inelastic, then the AER is correct in focusing on the minimisation of cross-subsidisation as an objective, however, the other primary objective should be that the pricing methodology should minimise overall administrative costs. The incremental cost approach proposed by United Energy is much simpler and easier to understand than the cost-revenue test, and further, it still ensures that new customers are 'subsidy free'; and

- The use of the word 'possibly' in the AER's final sentence - *"……the cost will be included in a customer's revenue test <u>possibly</u> resulting in a capital contribution, thus providing a locational signal*" - underlines the risk that a connecting customer will in fact not see any price signal under the revenue-cost test. That is, the AER's methodology 'might' provide locational signals, but it definitely cannot 'guarantee' that a locational price signal is sent to that connecting customer, because it cannot guarantee that incremental costs will always exceed incremental revenue.

Finally, United Energy reiterates that moving away from the cost-revenue test to a pure incremental cost approach, in no way impinges on the pricing framework's ability to ensure that customers receive a subsidy free price (as the AER terms it), as the NER (clause 6.18.5 Pricing Principles) still requires on-going DuOS tariffs to be set at such a level that for "*each tariff class, the revenue expected to be recovered should lie on or between: an upper bound representing the stand alone cost of serving the customers who belong to that class; and a lower bound representing the avoidable cost of not serving those customers*".

United Energy Proposal:

United Energy considers that:

- The revenue-cost test is not "required" to ensure customers pay at least their incremental costs; and
- The AER's pricing framework cannot guarantee efficient outcomes.

Further, the only way that it can be ensured that a customer pays their incremental costs, as well as providing them with the appropriate locational price signals, is to simply remove all revenue from the calculation.

Finally, such an approach is the only approach that is consistent with the NERs, and the broader NEO.

6.4 Non-contestable costs versus Costs directly incurred by Customers

United Energy notes the discussion by the AER on page 15 with regards to the treatment of non-contestable costs versus when those costs that are directly incurred by the customer or where a third party is engaged by the customer to provide those services. In particular, the AER states that:

> *"In a non-contestable environment, all costs are incurred by a DNSP and all the revenue is received by the DNSP, therefore, all costs and revenues would be included in the cost-revenue-test. However, where some costs are paid by a customer directly to a third party service provider, or where the customer performs some of the work (i.e. in the case of some developers), the application of a cost-revenue-test is less clear. The AER's preliminary view is that the cost-revenue-test should be applied only on the costs incurred, and revenue received, by the DNSP. Where the costs are borne by a third party, they should not feature in the cost-revenue-test. Otherwise, the AER considers a customer would always seek the DNSP to perform the works given that the DUoS payment would offset the cost of the project, whereas if an accredited service provider undertook the works, the customer would pay the full cost to that provider in addition to DUoS payment to the DNSP. The AER considers that not including competitive services in the cost-revenue-test is more likely to facilitate competitive neutrality of contestable services in accordance with the purposes of the guideline."*

Beyond this statement, there appears to be little discussion of this issue in the Preliminary Position Paper.

United Energy notes that the practical application of the above statement (which was also confirmed by the AER at the Public Forum) involves the DNSP, for each customer connection, having to either:

- exclude from the cost-revenue test any costs borne by the customer itself (or a third party engaged by the customer) in providing a particular service, or

- include in the cost-revenue test the costs of that same service, if it was to be provided by the DNSP.

Firstly, United Energy notes that this is inconsistent with current practice in Victoria, whereby the costs incurred by third parties are brought into the incremental costs versus incremental revenue framework. More importantly, United Energy considers that the main by-product of this approach would be to encourage developers to virtually always obtain that service from the DNSP, as this is the only way they can get the cost included in the cost-revenue test (and therefore, obtain a reduction in the cost of those works via the application of the incremental revenue against those costs). Further, this may have significant implications for United Energy, from a resourcing perspective, as all connections are currently treated as being contestable, thus, there is a significant penetration of third parties providing these services in United Energy's area.

Following on from this, United Energy notes a number of the AER's comments at the public forum that inferred that the AER considered NSW – with its fully contestable approach to the provision of connection services – to be potentially incompatible with the incremental revenue less incremental cost approach to determining customer contributions. This was because as it was contestable, a 'subsidy free' price could be assured. Whilst not wishing to comment on the NSW position per se, United Energy sees little tangible difference between the NSW contestability situation, and that which occurs in Victoria, at least in United Energy's area.

Finally, United Energy notes that this issue is negated, if connection charges were to be based purely on the incremental cost of providing that service – that is, if incremental revenue were to be removed from the calculation. In particular, whether the service is provided by a third party or not, the "cost is the cost", therefore, the basis for the DNSP's connection charge is entirely transparent, and if the connection service is contestable, then the connecting customer can simply engage a third party to undertake that connection, if it is economically efficient for them to do so.

United Energy Proposal:

United Energy considers that:

- The proposal to exclude the costs incurred by third parties to provide connection services would incentivise connecting customers to always seek those services from United Energy, which in turn creates resourcing and timing problems.
- There appears little tangible difference between the NSW contestability situation – which the AER appears to concede that the incremental revenue less incremental cost test may not be appropriate - and the situation currently occurring in United Energy's region.
- Moving to a pure incremental cost approach to charging would overcome this issue – because the 'cost is the cost', no matter who provides the service.

7. Proposed Changes to the Cost-Revenue Test

Having regard to the above, United Energy proposes two key changes to the AER's proposed cost-revenue test. These are:

- Incremental revenue should be removed from the calculation in its entirety. Therefore, the minimum charge to a customer would be linked to the direct cost of connecting their property/development to the existing shared network; and

- Where the customer is out-of-sequence, due to their size, timing or location, then, subject to certain exclusions outlined below, that customer should also be charged the costs of bringing-forward the augmentation of the shared network, relative to the timing that would reasonably be assumed to occur under the business' BAU capital expenditure case.

The reasons for this approach are:

- The NER requires that variable revenue be set at a level that covers the incremental cost of servicing that development, therefore, neither needs to be in the calculation. Notwithstanding this, United Energy acknowledges that there may be some disconnect between the 'average' LRMC, which underpins the distribution business' postage stamp variable price, and the actual LRMC associated with additional demand in that particular geographic area. However, United Energy considers that overcoming this issue via developer charges is a second-best outcome; rather, businesses should be incentivised to set cost reflective prices. Therefore, whilst the NER in effect requires the setting of cost reflective prices, the removal of variable revenue from this calculation further reinforces the incentive for businesses to set cost reflective prices, by customer classes, so that a business' development risk is limited (if they get more development in a high cost area, then this manifests itself in higher revenue being received from variable prices);

- Further, standing charge revenue should also be removed along with the aforementioned removal of revenue from variable charges, because even with the removal of the variable charge revenue, there is still a possibility that inefficient locational decisions could occur if incremental revenue exceeds incremental costs, as was illustrated in the previous section of this response. Given that this is still a risk, and potentially an increasing risk, given broader price rises affecting network businesses across Australia, United Energy advocates the removal of all standing charge revenue from the customer contribution calculation methodology. This, combined with the removal of incremental variable revenue, would mean that a customer's contribution would only reflect their 'pure' incremental cost of supplying that connection, along with the bring-forward costs of augmenting the shared network, if that development is out-of-sequence (relative to their BAU case). This removes the risk that a customer may adopt an inefficient connection decision (location/sizing) as a result of facing a price signal that is not reflective of the incremental cost of connecting in different locations; and

- Where the DNSP reasonably considers that the connection of that customer is out-of-sequence, relative to the distributor's own business-as-usual projection, then the connection of such a customer imposes different costs by comparison with what is assumed in their business as usual capital expenditure program (which underpins the LRMC calculation and therefore, variable prices). Subject

to certain exclusions (namely, the thresholds and exclusions established under Chapter 5A (b)), United Energy considers that it should be able to charge that customer the bring-forward costs of augmenting the shared network in advance of when it would have otherwise been augmented under its business-as-usual case. These prematurely incurred costs would be added to the direct costs of connecting that customer, to form the overall customer contribution. Further, it is noted that in this scenario, United Energy considers that out-of sequence development does not bring forward revenue either; rather, it simply displaces the development activity that would otherwise have occurred under the DNSP's BAU scenario. For example, bringing forward the connection of say, 1,000 lots, in one area does not bring forward the revenue that would be collected by the distribution business associated with that 1,000 lots, rather, it just displaces 1,000 lots of development that would have otherwise occurred elsewhere in United Energy's distribution area under its BAU scenario at that time. This is particularly so given that broader economic conditions, which are the key driver of customer connections, should be assumed to be the same under both scenarios (with or without that customer connection). Therefore, relative to the BAU case, the DNSP does not collect more revenue, nor does it change the timing of when revenue is collected. Overall, this provides a direct price signal to the customer to connect both in-sequence, and in locations where there is spare capacity.

A possible advantage of charging customers for the full, direct costs of their connections is that future growth in network pricing charges will be more constrained or muted. This is because customer contributions are essentially a negative entry in the roll forward asset model, offsetting capital expenditure, and hence a high level of contributions has the effect of moderating growth in the regulatory asset base. In essence, therefore, there is little or no likelihood that the costs of connections for new customers will be recovered across the entire customer base.

Finally, United Energy notes that the removal of incremental revenue from the customer contribution calculation overcomes the issue associated with the AER removing third party costs from the test, whilst requiring the DNSP's own cost for providing the same service to be included. In the absence of United Energy's proposed changes to the cost-revenue test, United Energy considers that this issue would need to be specifically addressed in any revised position put forward by the AER.

7.1 Transitional arrangements

If the AER accepts the proposal by United Energy that customers should be charged for the direct and immediate costs of their new connections, and in some instances also for the augmentation that may be necessitated by the new connection, then consideration will need to be given to the transition away from the current charging model, which is underpinned by Guideline 14. United Energy suggests that the new approach could be phased in gradually by applying the Guideline 14 model to a progressively smaller share of actual customer connection costs. The distribution business would demand full cost recovery for the remaining share. Details of the transitional arrangements can be worked out at a later stage.

8. Other Supplementary Issues

United Energy observes that over and above the application of the cost-revenue test, there are a number of other issues that it considers may stem from the application of the AER's Preliminary Position paper. These are:

- Threshold for shared network capacity;
- Thresholds above which tenders must be called for connection works;
- Pioneer Schemes;
- Security fees; and
- Pre-calculating a charge for certain customer classes.

8.1 Threshold for shared network capacity

United Energy does not object to the use of the AER's proposed threshold, namely that a retail customer below 100 Ampere (~70 kVA) cannot be required to make a capital contribution towards the cost of the augmentation.

However, United Energy considers that this threshold should apply to the costs of bringing forward any augmentation that is associated with out-of-sequence development. This would allow the AER to adopt an exclusion policy that is consistent with the requirements of chapter 5A, whilst also developing a pricing methodology that delivers more cost reflective price signals to all customers.

8.2 Thresholds for calling tenders

United Energy notes the AER's statement that[6]:

> "*The AER seeks comments on its preliminary view that:*
>
> *- Subject to customer agreement, DNSPs should call tenders for connection works over $3000.*
>
> *- For works below this threshold, DNSPs should use pre-established period (standing) contract prices from qualified third party contractors as the basis for cost calculation*."

In particular, United Energy observes that:

- The cost of actually going through even a small scale tender process (6 quotes from contractors) is around $3500, whilst to go to a fully developed tender process costs in the order of $7000. Therefore, the AER's proposed threshold would lead to inefficient outcomes occurring, namely the cost of the tendering process itself would be greater than the tender value; and

[6] Australian Energy Regulator, Issues and AER's preliminary positions: Connection charge guidelines: for accessing the electricity distribution network, 10 June 2011, Page 20.

- Following on from the above, the AER should explicitly state that the customer can choose to go to Tender, but they must pay for the costs of going to Tender. This could take the place of setting a 'hard' threshold. By doing this, the AER will ensure that customers only go to Tender where they consider there may be net benefits of entering into that tender process. This is consistent with United Energy's existing practices, and more broadly, is consistent with sending appropriate price signals to connecting customers such that customers only seek to enter into a tender process where there might be net benefits to them, after they have paid the cost of engaging in the process itself.

8.3 Pioneer Schemes

United Energy notes that whilst customers are currently able to request the adoption of a Pioneer Scheme, there have been few requests made over the past ten years. This indicates that the scheme may have been of little relevance to United Energy's customers in the past, which is not surprising as connections in its area are predominately in-fill development, as opposed to new rural extensions. Further, if larger scale developments were to occur on the out-skirts of United Energy's existing network, then it is the developer who is constructing assets to service the entire development. Again, the application of a Pioneer Scheme would appear to be of less importance in United Energy's area than in some other distribution areas(e.g., predominantly rural based networks).

Further, United Energy notes that a Pioneer Scheme is likely to be very complex to administer – potentially tracking details for thousands of connection assets within in a short period of time (3 to 5 years). United Energy considers that before requiring the application of such a scheme across all businesses, a more detailed understanding of the costs of administering the current scheme is fundamental to assessing whether or not there would be net benefits from the adoption of such a scheme – particularly in an area like United Energy's where it has little application.

On a separate, yet interlinked issue, United Energy notes the AER's question with regards to "*approaches to deal with the costs allocation issues where a DNSP provides a network extension on request of a single customer, to a standard greater than that customer requires due to the DNSP's network planning process*".

United Energy notes that if the AER is referring to the sizing of the asset for future development, then the rebate scheme should cover off this issue. In particular, if the Pioneer Scheme covers the full cost of the assets, and the normal planning horizon is around 7 -10 years in electricity, then all that will happen is that the constructor of the assets (the original connecting party) takes the development risk in that area, as opposed to the broader customer base if the DNSP were to have constructed that asset.

Put another way, if, immediately after construction, that asset's capacity is taken up by other connecting parties, the original developer will be immediately compensated as it will be rebated the full amount (expect for his/her share of the asset's capacity) virtually immediately. On the other hand, if no development occurs, then they bear the full cost associated with that asset. United Energy considers that such an outcome is equitable, because what it means is that without the existence of that first development, that asset would not have needed to be constructed. United Energy notes that this is consistent with what it considers should be an objective of the charging framework, namely, that there be a financial penalty for connecting in areas that are demonstrably inconsistent with what is the logical (from an economic

perspective) sequence of development. In this case, if no rebate occurs, clearly the development has been out-of-sequence.

8.4 Security Fees

It is noted that whilst United Energy does not currently have a Security Fee regime in place at present, it is currently investigating the possibility of implementing one for the remainder of this regulatory period, under the auspices of Guideline 14.

Therefore, United Energy supports the AER's Preliminary Position Paper in allowing the application of such a scheme, in particular, United Energy would support the explicit allowance for this scheme to cover off both:

- The default of a customer prior to the completion of the evaluation period (e.g., default prior to the 15 years); and
- Revenue being materially less than what was assumed when the customer contribution was originally calculated.

Obviously, a Security Fee scheme is not required if the AER reverts to a pure incremental cost approach as proposed by United Energy in this paper.

8.5 Pre-calculating a charge for certain customer classes

On page 15 and 16 of the AER's Preliminary Position Paper, the AER states that:

> *"While the AER considers that the cost-revenue-test is required to ensure customers are contributing at least their incremental costs, for many classes of customer, a set capital contribution may be the most administratively efficient manner to charge for connections. For basic and some standard connection offers, the AER would allow the amount of a capital contribution to be pre-calculated for all customers within a class.*
>
> *Where this amount was pre-recalculated it would be done using a cost-revenue-test based on an average or typical customer within the class. As such, large groups of roughly homogenous customers would be able to access connections on consistent terms at a consistent price.*
>
> *The AER considers that:….For larger customers, or customers with specific requirements in addition to standard connection services, the cost-revenue-test would need to be applied individually. As DNSPs can determine what standard connection offers to provide, the AER considers that DNSPs will be able to balance the administrative costs against ensuring that customers are meeting at least their incremental cost."*

In short, the AER appears to advocate the adoption of an average charge for homogenous groups of customers. Even if the cost of connection is considered to be similar across a 'customer class', this does not take into account the varying levels of revenue that might be expected to be received from a particular customer, given its location, relative to the United Energy's average revenue per customer. It is known, from previous analysis that energy consumption varies significantly by geographic region. This can be due to a number of reasons, including the average house size in that geographic region (postcode) and the weather patterns affecting that house (e.g., inland versus coastal). However, based on the historic data, the most important driver appears to be whether that house is located in a holiday region (i.e., whether it is a holiday home) or not.

Therefore, United Energy wishes to alert the AER that the 'class of customers' to which the AER refers may be more reflective of their location, as opposed to 'class' ('residential; small commercial) per se.

Appendix 1. Answers to Detailed Questions

Table 8.1: Answers to Detailed Questions

Question	Initial United Energy Comment
Definition of: • Direct connection assets • Extensions • Augmentation • Shared Network Augmentation 1. The AER seeks comments on the above proposed definitions and those in appendix A for use in the connection guideline.	The AER should conform to the definitions in the glossary of the National Electricity Rules (chapter 10). Other definitions should be sourced from chapter 5A of the National Electricity (Retail Connection) Amendment Rules 2010.
2. The AER seeks comments on its design criteria for the connection charge guideline.	The design criteria are addressed in chapter 5 of this submission. There is comparatively little in the AER's design criteria that links back to the NEO. The minimisation of cross-subsidisation may be a worthy objective, but there is nothing in the design criteria that emphasises the need to promote productive, allocative and dynamic efficiencies. Alternatively, there is nothing which explicitly states that the customer contributions methodology should seek to "*promote efficient investment in, and use of, electricity services…".*

Question	Initial United Energy Comment
3. The AER seeks comments on its preliminary position to apply a cost-revenue-test of the form CC = ICCS + ICSN – IR(n=X).	The issue of the cost-revenue test is discussed in chapter 6 and chapter 7 of this report. Further, as noted in the response to other questions, rebates should be explicitly provided for in the formula if a Pioneer Scheme is to be adopted. In addition, capital costs above the least cost technically appropriate (LCTA) solution should also be explicitly provided for in the formula, as an additional parameter.
4. The AER requests comments regarding whether DUoS is the appropriate measure of revenue to use in the cost-revenue-test.	See comments in main body of report regarding the removal of incremental revenue from this calculation.
5. The AER requests comments on the appropriate assumptions regarding the connection period for new connections. The AER requests comments on how much flexibility DNSPs, or new business customers, should have to alter these default assumptions.	If incremental revenue is retained, then United Energy does not have any issue with these assumptions, but would like to emphasise that businesses should be given the flexibility to alter the assumptions under certain circumstances.
6.The AER requests comments regarding whether the WACC is the appropriate discount rate to use in performing the net present value calculation. The AER requests comment regarding whether it is appropriate to use a pre-tax WACC, or a post-tax WACC with a separate adjustment for taxation.	Intuitively, United Energy considers that a pre-tax WACC would appear to make sense, and would minimise complexity in the modelling. However, the company proposes to undertake further analysis on this issue before a final decision is made.

Question	Initial United Energy Comment
7. The AER requests comments regarding the appropriate assumption of the future price path to use in the cost-revenue-test.	United Energy does not support the retention of the incremental revenue versus incremental costs model. Therefore, with that caveat in mind, United Energy would like to express the following views about an appropriate price path: • An indefinite continuation of the current price path. United Energy rejects such an approach, and would argue that the X-factor in the final year of a regulatory period is set in a unique manner, and is therefore unsuited to the formulation of forward revenue projections. According to clause 6.5.9 (b) (2) of the NER, the final year X-factor must be determined in such a way as to minimise, to the extent possible, the variance between the expected revenue for the last regulatory year of the regulatory control period, and the annual revenue requirement for that last regulatory year. • An historical average growth rate. United Energy supports this notion in principle, but believes that the business should retain some discretion about the actual technique used to calculate an historical average. • Trend prices in line with CPI. United Energy would not object to the application of this method. • Flat price path. United Energy believes that there may be some merit to this approach.
8. The AER seeks comments on its preliminary view that an extension should be funded by the customer requiring the extension, subject to the cost-revenue-test. The AER seeks comments on its preliminary view that: • Subject to customer agreement, DNSPs should call tenders for connection works over $3000; and • For works below this threshold, DNSPs should use pre-established period (standing) contract prices from qualified third party contractors as the basis for cost calculation.	United Energy agrees, but as stated in the main body of the report, this should not be offset by the incremental revenue associated with that customer. The issue of the threshold for calling tenders for works is discussed in section 8.2. United Energy believes that no threshold should be applied. Customers should be able to exercise their right to call for alternative quotes. Distributors should publish the costs associated with proceeding to a full tender, and the costs associated with selecting services from amongst the members of a preferred panel of sub-contractors.

Question	Initial United Energy Comment
9. The AER seeks comments on its preliminary view to charge for shared network augmentation on a per unit rate based on the calculation method outlined in the South Australia Guideline No. 13.	Customers should pay for the incremental costs that result from bringing forward the construction of the shared network, if the customer specific connection occurs out of sequence with what might be regarded as the normal course of development of the United Energy distribution network. Customers should also only be responsible for the particular augmentations that can be directly ascribed to their forecast activity. In practice, this may mean that customers should only pay for augmentation of upstream components. For instance, if a distribution customer connects directly to a high voltage feeder, at an exit point, then the customer can only be held liable for the payment of costs towards the sub-transmission lines, the zone sub-station, and the high voltage feeder itself, if an augmentation is required. The customer cannot be charged for any development that may be needed to a distribution sub-station, or to the low voltage mains network. The South Australian Guideline 13 can be used to set average contribution rates which are related to the costs of augmentation of the shared network.
10. The AER seeks comments on its preliminary view to allow DNSPs to segment their network into areas where different shared network augmentation charge rates would apply.	See comments in main body of report regarding the removal from this calculation of the incremental revenue and incremental costs of augmenting the shared network.
11. The AER requests comments on: • what is the most appropriate manner to calculate the operation and maintenance costs imposed by a new customer • should the O&M cost be excluded from the incremental cost calculation; and, instead, the incremental revenue calculation be adjusted, based on the equivalent network tariff with the O&M component removed?	As inferred, but possibly not necessarily explicitly stated, in the main body of the report, if incremental variable revenue is removed from the calculation, all incremental costs associated with connecting customers in-sequence should be excluded from the customer contributions calculation. This would also include O&M costs. If Incremental revenue (and therefore cost) is maintained in the calculation, then O&M is necessarily required to be included in the calculation. Further, United Energy considers that this be: • Linked back to the most recent AER Final Decision numbers for scale efficiencies, and step changes that can be clearly linked to changes in customer numbers; and • That the O&M cost be converted into a percentage of CAPEX, as this necessarily creates the link between the assets provided to service that customer, and the O&M costs associated with those assets.

Question	Initial United Energy Comment
12. The AER seeks comments on its preliminary view to set a fixed demand threshold rather than a threshold dependent on local capacity.	See comments in main body of report regarding the removal of the incremental revenue and incremental costs of augmenting the shared network from this calculation. Notwithstanding that, United Energy considers that if the AER were to go down this path, there is in fact merit in the option of setting the demand based on local "spare" capacity, not local capacity. United Energy notes the AER's concern about complexity and the issue of interconnectedness of the network, which has led the regulator to choose a fixed demand threshold, rather than one which varies with local capacity. However, referencing the threshold back to the location (and even better, the spare capacity at a location) at least provides some locational signal. Fixing it for some arbitrary classification (e.g., urban, rural, CBD) is virtually useless when it comes to conveying locational signals.
13. The AER seeks comments on its preliminary view to set a threshold for most areas of networks on the greater of: • the level of customer demand in each DNSP's network that would result in approximately 10 per cent of new customers paying for specific shared network augmentation (based on existing customer demand information); or • 70 kVA (equivalent to 100 Ampere 3-phase low voltage supply). The AER seeks comments on its preliminary view to allow DNSPs to nominate less developed areas of the network where a different threshold would be more appropriate. The AER seeks comments on its preliminary view that customers connected on SWER lines should pay for shared network augmentation on demand above 25kVA as the default level unless a different threshold is nominated by a DNSP and deemed appropriate by the AER.	See comments in the main body of report relating to the removal from this calculation of the incremental revenue and incremental costs of augmenting the shared network. United Energy accepts the AER's proposed threshold level (e.g., ~70kVA). United Energy provisionally accepts the proposition that a distributor ought to be able to nominate a less developed segment of the network in respect of which a different threshold would be more appropriate. The preliminary position taken by United Energy is that the 25kVA threshold for a SWER line is too high, and that a more appropriate value would be in the vicinity of 20kVA.

Question	Initial United Energy Comment
14. The AER seeks comments on its preliminary view that it will be difficult to verify and enforce a customer's peak coincident demand and therefore the threshold should be set based on peak demand.	United Energy considers that it is possible to base a threshold on a customer's coincident peak demand, however, the coincident factor cannot be customer specific, and rather, it would have to be based on average co-incident factors for the particular class of customer (be it a sub-transmission customer; an HV customer; or an LV customer). The threshold cannot be based on the specific customer's peak demand, co-incident factor, because a) a business will never know what that actually is, until after they have paid their customer connection charge, and connected to the network; and b) because there is a significant incentive for the customer to claim that their load will not be co-incident, but there is no financial penalty applicable if a lower than actual co-incident demand is accepted by the DNSP (unless a security fee is used to cover off on this risk entirely).
15. The AER seeks comments on its preliminary view that the approach outlined in ESCOSA's Guideline No. 13 is a fair and practicable approach for estimating peak demand that should be adopted.	If incremental revenue is removed, along with the incremental cost of augmenting the shared network, then it is likely that a capacity threshold for shared network augmentation charges will not be required. Bearing in mind the aforementioned caveat, United Energy would want to examine the implications of the South Australian guideline more closely before making a commitment as to its application. United Energy understands that the approach used by ETSA Utilities results in the adoption of a provisional value in circumstances where the distributor and the customer cannot agree upon an appropriate demand forecast. The projection is then revisited after three years, drawing upon actual load data. The approach seems to have merit, in principle, but could be administratively burdensome in practice.
16. The AER seeks comments on its preliminary view that a customer who is required to pay for shared network augmentation, would pay for shared network augmentation on the amount of their peak demand above the shared network augmentation threshold.	If incremental revenue is removed, along with the incremental cost of augmenting the shared network, then no threshold is necessarily required, except as the basis for determining whether that customer's connection brings forward the augmentation of the shared network. If the AER adopts United Energy's proposal, then United Energy considers that the appropriate variable to consider is not peak demand above the threshold amount, rather, it should be the full value of peak demand *per se*. This is because there is no risk that a customer is already funding a part of the augmentation through DuOS charges (which is a reason for applying the threshold using the AER's approach), because it is the bring-forward costs that are included, not the unitised cost of the shared network itself.

Question	Initial United Energy Comment
17. The AER seeks comments on its proposal that embedded generators should fund specific network shared network augmentation to remove constraints on their outputs due to limits of the existing network.	If the policy objective is to promote the connection of embedded generation, then United Energy believes that the existing Victorian Guideline 15 should be retained[7]. Under the Guideline, embedded generators are only liable to pay for shallow augmentation costs and not deep augmentation costs. Therefore, when an embedded generator links into the distribution network at a zone sub-station, it pays for the immediate connection costs, but is not required to contribute towards any costs which might be incurred upstream at the terminal station. Typically, the need may arise to upgrade circuit breakers at the terminal station in response to higher fault current levels.
18. The AER seeks comments on: • Should the AER place limits on the maximum amount of prepayment that a DNSP can charge the connecting customer? • If so, should the AER specifically limit the amount of a prepayment to the actual upfront costs incurred by the DNSP, or should it set a maximum percentage?	There should be no limits placed on the maximum amount of pre-payment. The value of any pre-payment should at least reflect the upfront costs incurred by the DNSP in assessing a development application, and in providing that connection service. The practice adopted by United Energy to-date is that full pre-payment is required for connection projects that are more straightforward. United Energy considers that such an approach is administratively efficient and does not result in any disadvantage to the customer. In contrast, larger projects are typically divided into separate tranches or stages, with an advance payment required at pre-determined stages of the work.
19. The AER seeks comments on whether its connection guideline should have an option for DNSPs to implement security fee schemes.	See main body of report for details of United Energy's position on this issue.
20. The AER seeks comments on its proposed principles for a security fee scheme.	See main body of report for details of United Energy's position on this issue.

[7] Essential Services Commission, Electricity Industry Guideline No. 15, Connection of Embedded Generation, Issue 1, August 2004.

Question	Initial United Energy Comment
21. The AER seeks comments on its preliminary view that the assets subject to a rebate scheme should be depreciated over a 20 year term. The AER seeks comments on its preliminary view that a rebate scheme should have regard to the length of an extension and the capacity of the assets used by subsequent customers. The AER seeks comments on its preliminary view that a $500 refund threshold strikes an appropriate balance between a DNSPs' administrative costs and the materiality of a refund. The AER seeks comments on its preliminary view on customer payments when the network is built to a greater standard than a customer or group of customers would otherwise require, if the DNSP did not consider it more efficient to build the network to a greater standard based on forecast load growth. The AER seeks comments and alternative approaches to deal with the costs allocation issues where a DNSP provides a network extension on request of a single customer, to a standard greater than that customer requires due to the DNSP's network planning process.	The AER explained at the Public Forum that 20 years was chosen to effectively reduce the incentive to delay connection until just after the 7 years has elapsed. It is not based on any assessment of asset lives. United Energy considers this to be broadly reasonable. United Energy agrees with the AER's second point. $500 appears relatively low; United Energy considers that the AER should increase this threshold, possibly to $1000. United Energy understands this scenario to be where a customer or group of customers has sought a connection that is above the least cost technically acceptable solution (LCTA). If this is the case, then the incremental cost, incremental revenue assessment should not be applied to the full project costs. Instead, the Guideline 14 model should only be applied to the costs of the LCTA solution, while the difference in costs between the solution adopted and the LCTA option, should be added below the line (after the cost-revenue test has been undertaken). United Energy believes that the customer contributions' formula should reflect this practice. Obviously, none of this is of relevance if United Energy's proposed 'pure' incremental cost approach is adopted. This has been discussed in the main body of the report under Pioneer Schemes.
Appendix A 22. The AER requests feedback on the completeness, consistency and adequacy of the proposed definitions. The AER seeks comment on whether stakeholders require clarification of any additional terms.	The concept demonstrated in Figure 1.2(a) is quite unacceptable in Victoria, because the point of supply should never be within the customer's premises. A distributor would normally be responsible for an underground service, but cannot be responsible for the provision and maintenance of such a service within the customer's premises. Figure 1.2(b) is a more satisfactory alternative, with an underground consumer mains for which the customer is responsible. The pits are in the footpath, and the point of supply is at the boundary.