



12-Mar-2010

Australian Energy Regulator  
**Attention Chris Pattas**  
GPO Box 520  
MELBOURNE, VIC 3001

Dear Chris,

RE: Benchmark upstream augmentation charge rates for CitiPower's network – request for comments.

Thank you for the opportunity to comment on the AER draft decision relating to what should be fair and reasonable charging rates for upstream augmentation costs for CitiPower's network.

Utilacor is an energy consultancy specialising in the provision of energy management services primarily focused on small to medium business in Victoria and across Australia. Utilacor has been in operation since 1995 and is a leader in the field of assisting customers in matters concerning energy regulation including new connections of power to the electricity grid.

**Transparency:**

In previous submissions a common thread has been the need for more information and greater transparency. The new proposed model does provide more transparency in some areas of the calculations. An area where further transparency should be provided is in the calculation of the MCR rates that have been used by CitiPower (and likely to be used by all other distributors).

For customers (in all distribution areas) to be confident with the proposed model, transparency regarding how MCR rates are calculated is essential. Load diversification, load growth and how historical numbers are used in calculating the forward MCR rates should be provided to ensure that it results in a consistent & transparent model across all distribution businesses. Is there any allowance for re-balancing between one year and the next to account for possible over/under collection?

It is possible that this is already the case - but the draft determination provides little information on this and appears to accept this MCR number as correct without any detailed explanation.

**Diversification:**

The diversity factor allowed by CitiPower is as follows:

- at sub-transmission level 90 per cent
- at zone substation level 70 per cent
- at high voltage level 80 per cent
- at distribution substation level 90 per cent
- no diversity is allowed at low voltage street mains network level

This gives a total diversity factor of 45% that is used in the calculations to arrive at the MCR rates.

I believe further review is required on diversification factors. One possibly unique issue when considering diversification of new connections is how the actual demand achieved by a customer relates to the demand that is written/contracted on a customer's connection agreements. Upstream augmentation costs on connection agreements have generally been calculated by distributors based on the maximum supply capacity as stated on the connection agreement.

Generally, distributors require load limiting devices to be installed to ensure that customers do not exceed the maximum supply capacity. As a result, it is common for customers to request (and for distributors to recommend) that the maximum supply capacity be set higher than a customer will actually achieve or indeed require.

Based on our experience in the field, we find that it is not uncommon for a customer's maximum supply capacity to be 200% higher than the values that they actually achieve or require in their actual operations. Some examples are provided below:

### **Residential Property**

A residential property had a connection agreement put to them where the maximum supply capacity was 100amps per phase.

It is estimated that the actual maximum load is 49amps per phase. As a result there is a diversification factor of  $49/100 = 50\%$  applicable to the maximum supply capacity versus the actual load.

### **Commercial Property**

A commercial customer signed a connection agreement with a maximum supply capacity of 2100amps or 1500 kVA.

To date, the customer's maximum 15min demand has only reached 747kVA under full load. As a result the diversification factor is  $747/1500 = 50\%$  of the maximum supply capacity versus the actual load.

### **Average over 12 commercial property connections**

A review of 12 commercial customer connections agreements has shown that the total connected maximum supply capacity was 21,528 kVA.

To date, the undiversified (each customer's maximum demand) has reached 8,219 kVA. As a result the diversification factor is  $8219/21025 = 38\%$  of the maximum supply capacity versus the actual load at the sites.

The above diversification numbers represent real examples from customers that are connected to the Victoria's electricity network. Utilacor is happy to make the data available for your review if required.

In summary, there will always be a diversification factor between the demand that is used to calculate the MCR as stated on a customer's connection agreement and the actual value of the maximum demand that is realistically achieved by a customer when connected.

In our experience and in the examples provided, this diversification factor varies from 38% up to 50%. If our examples are representative of average values across all new connections, than we submit that this has a significant impact on the calculation of the MCR.

### **Low Voltage diversification:**

No diversification factor has been allowed for when connecting customers to the low voltage network when in fact there is a diversification effect for these customers. I question why this diversification factor has not been included when it does exist?

## Benchmarking

The net effect of diversification is a significant component of the calculations. As a result, a more transparent process on how this is calculated will be beneficial, and, we submit fair. It should be feasible for the distribution business to demonstrate the actual diversification by using historical data.

For example:

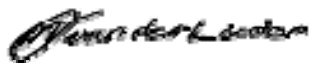
$$diversification = \frac{\sum \text{actual load increase due to new connections}}{\sum \text{maximum supply capacity applied to new connections agreements}}$$

This would provide a real value for the diversification that can then be used in calculating the MCR.

I am pleased to have had the opportunity to make a submission on this very important topic.

If you have any questions or require more information please do not hesitate to give me a call.

Yours Sincerely,  
**Utilacor Pty Ltd**



Matthew van der Linden  
**Director**