

The Chairman  
Tasmanian Electricity Industry Expert Panel  
GPO Box  
Hobart TAS 7001

Dear Sir,

**Response to Draft Report by Tasmanian Electricity Industry Expert Panel**

I have read with interest the Draft Report of the Expert Panel, and attended the public forum in Hobart on Thursday 2 February 2012.

While issues of increasing retail competition are important to Tasmanian customers, there are some points that the Panel has either overlooked or discounted as of less importance:

1. Customers value reliability of supply for the network costs currently included in tariffs.
2. Distribution network efficiencies do not come from large investment blocks, as do most transmission projects. Distribution network activities are large in number, with each one relatively small in nature, and therefore benefits to customers come from processes that are smoothly handled, processes that do not involve multiple handover of responsibilities.
3. Transmission events that affect retail customers are reported in a form that hides the effect on customers. When Transmission outages are reported in a form of "system minutes off supply", the data conveys very little to customers or to the Energy Regulator.  
A report that states that the outage caused loss of supply to "5,000 customers for 4 hours" is much more understandable, and consistent with the manner in which significant distribution outages are reported.

## **Reliability of Supply**

I previously made a submission to the Panel in April, and later in June 2011, about the issues of supply reliability to Retail customers.

My investigations as a Consultant in past years found that a substantial cause in the delay in restoration of supply was the slow response from Transend operators in providing fault data that would have enabled Aurora to identify the fault locality. In all mainland states, this data is immediately available to the Distribution operator.

Now that the Distribution Operations centre is located close to the Transmission Operations Centre, there is no valid reason why operational responsibilities for distribution circuit breakers should not be transferred to the Distribution Operators.

Electricity Industry colleagues emphasise the importance of the Distribution operator having control of the distribution circuit breakers and immediate access to the fault data recorded in the associated relays. All acknowledge that development of "smarter networks" would not be possible without Distribution operator control of the feeder circuit breakers and voltage controls, and access to the data held in the associated relays.

## **Efficiency of the Networks**

Operation of Distribution networks is characterised by many relatively small switching procedures – in Tasmania, upto 50 per day.

The switching procedures cover routine work, such as vegetation management, load transfers between source substations, and isolation of feeder sections for maintenance, and isolation for a host of community events such as fire services, traffic accidents, civil construction activities.

Added to the routine operations are fault operations, which can vary enormously from day to day.

To minimise costs in setting up maintenance, in load transfers, in fault isolation and supply restoration, data inputs are essential to the distribution operator, and continuity of process. Every delay at the start of the day increases costs as site work crews wait for clearances. Every delay at the end of the day increases costs as site crews wait for clearances and signoff from the Operations centre. These delays also add minutes to the outage times experienced by customers.

There are a number of places where Aurora has installed a switching device close to the transmission substation so that the Distribution Operator can control the HV feeder better. These devices duplicate the distribution circuit breaker and therefore represent unnecessary costs that are borne by customers.

Modern work practices in distribution networks include a large proportion of high voltage live line work and transfer of loads between HV feeders without supply interruption. Each task requires temporary safety measures that include adjustments to control and protection relays associated with the HV feeder circuit breaker. In mainland authorities, all these tasks are performed by the one operational team – distribution- and should be in Tasmania to optimise operational efficiency in both Transend and Aurora.

The Expert Panel recognises that “Smart Networks” are coming, and that Tasmania needs to be able to participate in this technology. To do so successfully, Distribution Circuit breakers need to be controlled by Distribution Operators.

Fault data provides the operator with an indication of the locality of the fault, helping field crews target the likely area. Knowing the locality of the fault enables early reconfiguration of healthy sections of inter-connected feeders to restore supply quickly to some customers – as demonstrated in some slides in my presentation. This technique is used increasingly by distribution network operators in other jurisdictions, and is compatible with tomorrow’s “Smart Network” technology.

I recommend that the Expert Panel ask for an independent analysis of fault management events to assess better the benefits that customers could derive from more logical management of the distribution network.

## **Transmission Event Reporting**

At the last Electricity Reliability Review conducted by the Energy Regulator, presentations were made by Aurora and Transend.

Both gave a summary and commentary on major events.

Aurora gave a summary of numbers of customers and the duration of outages for each event, typically less than 2000 customers per event.

Transend gave a summary of how many seconds of supply was lost averaged across the whole of the Tasmanian network. This was meaningless to customer representatives, and not in the interests of Tasmanian customers.

When questioned further on one event, it transpired that perhaps more than 10,000 customers lost supply for periods upto 4 hours.

I recommend that Transend be asked to report these events in a meaningful way – they should ask Aurora for customer numbers. Easily done.

## **Recommendations**

1. That the Expert Panel's report recognise that reliability of supply and interruption durations are just as important to customers as costs, and that an independent review be conducted of the network operational boundary between Transend and Aurora.
2. That changes to the responsibility boundaries in operating the Distribution Network will be necessary for customers to benefit from "Smart Network" technology.
3. That Transmission network significant events should also be reported in a customer-based format, as does Aurora.

Yours faithfully

David Asten  
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