

1 December 2006

Dr Pat Walsh  
Chairperson  
Essential Services Commission of South Australia  
MAC Building  
Level 8, 50 Pirie Street  
ADELAIDE SA 5000

Dear Pat,

### Heatwave Inquiry - Recommendations

I refer to the January Heatwave Inquiry Report in which ETSA Utilities was requested to provide a report addressing separately each of the Commission's conclusions and recommendations.

Our report was to identify:

- § the particular conclusion or recommendation;
- § our response to the conclusion or recommendation; and
- § the action taken in relation to the conclusion or recommendation (including timelines and expected outcomes) or, if no action taken, what actions are proposed (including timelines and expected outcomes).

The following table provides an overview of the status of each of recommendations contained within the Heatwave Inquiry Report – September 2006. More detailed comments are provided in Attachment 1.

Chptr & No.	ESCoSA Recommendation	Status
6.1	Monitoring "good practice" developments in network planning, in particular to ensure that planning basis adequately takes account of very hot weather conditions.	Completed
6.2	Ensuring that the LV Network load information that ETSA Utilities gains from received copies of Certificate of Compliance forms in the future, particularly in	Being finalised in conjunction with OTR

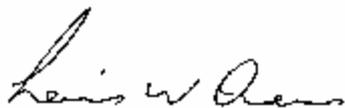
Chptr & No.	ESCoSA Recommendation	Status
	relation to installation or upgrades of air-conditioning units, is appropriately used in network planning.	
6.3	Ensuring that the After Diversity Maximum Demand (ADMD) value used in the planning of new subdivisions is adequate for expected current demand and reasonable future growth	Completed
6.4	Allocating the necessary resources to ensure that its pre-summer preparatory work, including necessary LV transformer upgrades, is completed prior to 31 December each year, ahead of likely peak times	Completed
6.5	Completing and full implementing the planned outage management system (OMS) and connectivity model by the end of calendar year 2006, and subsequently ensuring that the value of the required data is maintained to ensure that maximum value is extracted from this significant investment	To be Completed by April 2007.
7.1	The development of an internal definition of extreme weather events for which ETSA Utilities should be alert and responsive	Completed.
7.2	The incorporation of appropriate error margins into weather forecasts used for heatwave planning purposes	To be Completed by 1 Jan 2007
7.3	The feasibility of adopting commercial weather forecasting arrangements to provide better and more meaningful data to assist in planning for extreme weather events	To be Completed by 1 Jan 2007
7.4	Active engagement with the Bureau of Meteorology's Duty Forecaster on a regular basis during extreme events	Completed
8.1	Revising its internal processes and procedures for the management and tracking of LV network faults, by retaining central control of this function	Completed
8.2	Defining a formal emergency risk management role, with the view to appointing a risk manager to emergency response team	Completed
8.3	Exploring the need for non-operational staff (eg office-based staff) to be part of the response team during emergency conditions, to ensure that ongoing business culture development includes an emphasis on the "need to respond" during such conditions (with	Completed

Chptr & No.	ESCoSA Recommendation	Status
	appropriate financial recompense).	
8.4	Clarifying the internal responsibility for high-level decisions regarding priorities for deployment of field resources	Completed
8.5	Considering the use of qualified electrical contractors to supplement the internal resources of ETSA Utilities in tackling widespread LV outages	Completed
9.1	Detailed and reliable information on expected restoration times updated to the IVR system on a regular basis	Completed
9.2	Regular updates to key media outlets during extreme weather events, including access to ETSA Utilities' personnel, rather than assuming that media staff will have the understanding and take the time to interpret website information (at least initially)	Completed
9.3	Maintaining reliable, accurate and timely information on the ETSA Utilities' website	Completed
9.4	The ability to call in additional call centre staff at short notice for extreme weather procedures to incorporate a requirement to notify the call centre of possible demands on a timely basis	Completed
9.5	Generating information (both for the Commission and for internal purposes) on call centre overload event	Completed
9.6	Appointment of depot liaison officers to the emergency management team	Completed
9.7	The complete implementation of OMS and the connectivity model	Completed by April 2007

If you require further information, we will be pleased to provide it.

We look forward to the opportunity to discuss this report with you at your convenience.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Lewis Owens". The signature is written in a cursive style with a large initial 'L'.

Lewis Owens  
Chief Executive Officer  
ETSA Utilities

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## Chapter 6 – Recommendations (Pg 59)

- 6.1 *Monitoring ‘good practice’ developments in network planning, in particular to ensure that its planning basis adequately takes account of very hot weather conditions.*

ETSA Utilities has always been cognisant of the planning methodologies employed by other distributors, especially our sister companies in Victoria. Our internal network planning procedures have reinforced the requirement to monitor Network Planning methods used by other Australian electricity network service providers (eg distributors). ETSA Utilities monitors these practices through the Electricity Networks Association (ENA).

ETSA Utilities regularly reviews its distribution planning methodology, procedures and processes. In future, these procedures will be formally reviewed at least every 5 years or as appropriate. This formal review will specifically incorporate consideration of developments in interstate practices.

A formal review of our planning methodologies is currently underway and incorporates the outcome of a recent ENA survey on this matter, and is planned for completion in early December 2006.

Any changes to our Network Planning Criteria that arise from these reviews once approved for implementation will be documented in our annual Electricity System Development Plan, which is published on our website.

Status: Completed by early Dec 2006.

- 6.2 *Ensuring that the LV Network load information that ETSA Utilities gains from received copies of Certificate of Compliance forms in the future, particularly in relation to installation or upgrades of air-conditioning units, is appropriately used in network planning.*

ETSA Utilities supports this initiative of ESCoSA and the Technical Regulator to assist in increasing the number of advices we receive about the installation of new electrical equipment eg reverse cycle air-conditioners.

ETSA Utilities is currently in dialogue with the Technical Regulator regarding the Electrical Certificate of Compliance (ECC) forms and how information about air conditioners is included on the certificate, a copy of which is provided to us. On conclusion we will implement a system to capture the data for input into our LV network planning.

ETSA Utilities has taken steps to already improve the notification of increased load that it receives by using its new REX (Registered Electricians Extranet) to collate all air conditioner installation advices received from electricians related to new or upgraded connections. This information is important input for LV planning and monitoring of transformer loads.

ETSA Utilities has also issued media releases with a simple message to customers of:

“ETSA Utilities is urging customers to telephone in when they purchase or install a new air-conditioner – one of the simplest ways to help keep the power on in your street.”

Status: To be completed once negotiations with OTR finalised.

6.3 *Ensuring that the After Diversity Maximum Demand value used in the planning of new subdivisions is adequate for expected current demand and reasonable future growth.*

ETSA Utilities regularly reviews the After Diversity Maximum Demand (ADMD) that it applies to both overhead and underground mains areas. The standard ADMD has doubled in recent times from 4 kVA to 8kVA. ETSA Utilities regularly reviews the ADMD used based on measured load on LV transformers during summer peak load periods (eg January 2006). ETSA Utilities has permanent load monitoring equipment on sample LV transformers across metropolitan areas. The measured peak load on LV transformers in new land divisions was about 6kVA per customer during the January Heatwave.

As a result of this new peak load information based on an extreme hot weather period ETSA Utilities has increased its standard ADMD from 6kVA to 8kVA. However, the ADMD specified in the design of the electricity reticulation system depends on the location and the size of the dwellings proposed for the land division.

Our LV distribution planning procedures require a 5 yearly review of the standard ADMD or after a peak summer load period.

Status: Completed.

6.4 *Allocating the necessary resources to ensure that its pre-summer preparatory work, including necessary LV transformer upgrades, is completed prior to 31 December each year, ahead of likely peak times.*

ETSA Utilities is made aware of potential LV transformer capacity issues through its monitoring of transformer loads and customer enquiries. Maximum peak demands do not occur every year but generally occur every 3-5 years. A transformer capacity issue means that the electrical load of either one of three phases or the total capacity of the transformer may be exceeded under peak load conditions. This overloading of either a LV phase or the transformer causes customers to lose supply by either a fuse operating or a failure of the transformer. This overloading can be caused by customers increasing their electrical demand (eg by installing a reverse cycle air-conditioners) without advising ETSA Utilities.

ETSA Utilities is continually becoming aware of transformers with overloading issues. ETSA Utilities plans to remediate all known transformer capacity issues identified before the 31 December target date or within 20 business days of identification. Remediation works for transformers identified after the 30 November are processed in accordance with the targets established with ESCoSA under Quality of Supply complaints.

The remediation works will include where the transformer is not expected to be overloaded, balancing the phases of the transformer or where overloaded upgrading or installing additional transformers.

Funding of \$42M has been provided to upgrade the distribution system in preparation for summer 2006/07, including additional funding for transformer upgrades.

Status: Completed by 31 December 2006.

**6.5 *Completing and fully implementing the planned outage management system (OMS) and connectivity model by the end of calendar year 2006, and subsequently ensuring that the value of the required data is maintained to ensure that maximum value is extracted from this significant investment.***

The OMS is now and has been since June 2006 used to manage customer interruptions. The OMS groups customer calls to assist in the identification of the upstream electricity supply point (eg a fuse) from which all the customers without power are supplied. This identification process allows our personnel to be despatched to that location to patrol and determine the cause to enable restoration. This should normally improve restoration times.

OMS processes and procedures have been established and implemented to ensure changes to the distribution system are documented, geographic information system (GIS) updated and incorporated into the OMS.

Stage 2 of the OMS implementation which involves rural field data capture will be completed in December 2006 as planned. In addition, ETSA Utilities is also using its meter readers and GPS (Global Position System) to assist in improving the asset to customer link in rural areas of SA. The field data capture in conjunction with the meter readers will improve the accuracy of the customer to asset link from the initial 80% to about 95%.

Status: Completed by April 2007.

## [Chapter 7 – Recommendations \(Pg 71&72\)](#)

**7.1 *The development of an internal definition of extreme weather events for which ETSA Utilities should be alert and responsive.***

ETSA Utilities has four emergency response levels which are:

- § ERL0 – normal operation of the distribution system
- § ERL1 – Used to alert key operational personnel of events which have potential to escalate to ERL2 (eg hot weather where the forecast maximum temperatures are 35°C for two or more days with high overnight temperatures).
- § ERL2 - there are multiple outages affecting one or two ESCoSA Regions simultaneously and the duration of event is expected to be less than 24 hrs.
- § ERL3 – there are multiple outages affecting more than two ESCoSA regions and the emergency is expected to last longer than 24 hrs.

ETSA Utilities has updated its Emergency Procedures Manual to specifically include extreme<sup>1</sup> hot weather periods in its definition of ERL (emergency

<sup>1</sup> Extreme hot weather is designated as a heatwave when there are 3 consecutive days 38°C or more or 4 consecutive days of 35°C or more.

response levels). ERL 1 provides guidance on situation where an ERL1 should be called in response to forecast hot weather conditions. Also, ERL 2 now includes extreme hot weather and ERL 3 for extreme hot weather exceeding two days with associated outages.

Status: Complete

**7.2 *The incorporation of appropriate error margins into weather forecasts used for heatwave planning purposes.***

ETSA Utilities is currently negotiating with the BoM for additional products which can be used for input into our load predictor for hot days. The output required from the BoM is the chance of the maximum (daytime) temperature reaching 30°C, 35°C, 38°C and 40°C or more and the expected minimum (or over night) temperature exceeds 20°C, 25°C or 30°C or more. The BoM forecasts will be provided for 7 days in advance.

ETSA Utilities expects to have the new BoM products by 31 December 2006 (preliminary versions are already being reviewed).

Once ETSA Utilities has received the BoM reports the Emergency Procedures Manual will be amended to specifically include their use in determining when to declare an ERL1. Depending on the actual conditions this ERL may be escalated.

Status: Completed by 31 December 2006.

**7.3 *The feasibility of adopting commercial weather forecasting arrangements to provide better and more meaningful data to assist in planning for extreme weather events.***

See recommendation 7.2 above.

**7.4 *Active engagement with the Bureau of Meteorology's Duty Forecaster on a regular basis during extreme events.***

Our procedures (Emergency Procedures Manual) were updated to reflect the requirement to liaise with the BoM duty forecaster on a regular basis during extreme temperature conditions that may lead to a heatwave.

## [Chapter 8 – Recommendations \(Pg 82\)](#)

**8.1 *Revising its internal processes and procedures for the management and tracking of LV network faults, by retaining central control of this function.***

ETSA Utilities has developed and implemented a new procedure for the management of avalanche events which has been included in our QMS (Quality Management System). This procedure specifies the roles and procedures that will be followed and implemented under avalanche events (eg severe weather events).

The procedure extensively uses the Outage Management System (OMS) to collate, create restoration jobs, track progress and close out jobs. Jobs will be

managed centrally to enable accurate up-to-date information for management of the event. This information will also be used to update IVR and call centre operators.

The procedure has created new roles of Avalanche Coordinator, Avalanche Dispatcher (maintains over-view of emergency in the avalanche area), CaMS Local Dispatcher (dispatches jobs to the field crews), CaMS Closeout Officer (liaises with field crews to determine progress of restoration) and IVR operator (keeps messages on IVR current).

This procedure should enable effective management of avalanche events including the status of the avalanche event, how many customers are affected and the current status of restoration jobs, availability of resources and the ability to determine if escalation is required.

This procedure has been used in a recent severe weather event (ie State SAIDI > 3 minutes). Learnings have resulted from using this procedure under actual severe weather conditions and changes have been initiated from these learnings. ETSA Utilities uses the continuous improvement approach and will continue to amend the procedure to improve the outcome for customers. Each severe weather event is similar but different and therefore can generate a new learning.

Status: Complete

### 8.2 *Defining a formal emergency risk management role, with the view to appointing a risk manager to emergency response team.*

The escalation and resourcing decisions have been documented in the Emergency Procedures Manual. The emergency response team has access to ETSA Utilities' Manager Risk Management and Insurance (MRM&I) as required during any significant event.

Our MRM&I is heavily involved in the reviews of the Emergency Procedures Manual and the Bushfire Risk Management Manual and the associated procedures which manage events under both of these Manuals.

Status: Complete

### 8.3 *Exploring the need for non-operational staff (eg office-based staff) to be part of the response team during emergency conditions, to ensure that ongoing business culture development includes an emphasis on the "need to respond" during such conditions (with appropriate financial recompense).*

The concept of 'need to respond' has been underpinned and shown by

- § The establishment of allocated volunteers to particular emergency functions
- § Regular communication with volunteers
- § Specific training on the allocated function and customer communications (being updated for OMS by 1 December 2006)
- § The introduction of a specific allowance for field staff
- § The prompt response of volunteers during regular trials of the revised emergency procedures

It is not proposed to formally include specific references in job descriptions, rather to build a heightened awareness of customer service (through the Customer Service Strategy), continuing to build a constructive corporate culture and the inclusion of other duties as directed.

Also, a new 'avalanche' procedure includes utilisation of the new Services group with access to Demand and Network Management staff. Such personnel will be engaged in non-line work, thereby freeing up appropriately skilled resources to concentrate on supply restoration priorities.

Additional willing worker nominations have been received and more training for these roles will be provided before 1 December 2006.

Status: Complete

**8.4 *Clarifying the internal responsibility for high-level decisions regarding priorities for deployment of field resources.***

The improved information flows provided by the OMS and the Avalanche Procedure will enable improved business decisions during severe weather events including escalation when customers could experience long outages.

Where the organisation is resource constrained during severe weather events, the decision for deployment of the available resources will rest with GM DaMN or delegate (ie Asset Manager).

Escalation points and the responsibility for deployment of resources have been documented in the Emergency Procedures Manual.

Status: Complete

**8.5 *Considering the use of qualified electrical contractors to supplement the internal resources of ETSA Utilities in tackling widespread LV outages.***

This investigation has been completed. We have arrangements in place to use accredited powerline contractors to undertake emergency work and this is now included in our procedures.

The training requirements for electrical contractors (electricians) are too onerous to bring them up to Powerline level.

However, NOC (Network Control Centre) mechanics (electricians) will be used to attend single customer outages and to investigate an outage to determine the cause of the outage. The mechanic will then advise the field crews of the cause and direct them to the location of the fault to reduce the restoration time.

Status: Complete

## Chapter 9– Recommendations (Pg 94 & 95)

### 9.1 *Detailed and reliable information on expected restoration times updated to the IVR system on a regular basis*

The new 'avalanche' process includes providing up to date status information on outages which will be used to up-date both the IVR and the Call Centres. This procedure has been used during a low level severe weather event. ETSA Utilities has initiated changes due to the learnings from this event.

Status: Completed

### 9.2 *Regular updates to key media outlets during extreme weather events, including access to ETSA Utilities' personnel, rather than assuming that media staff will have the understanding and take the time to interpret website information (at least initially);*

ETSA Utilities uses the new 'avalanche' process to provide up to date status information from the centralised dispatch and control centre (see 8.1 above)

- § The information placed on the ETSA Utilities' website is downloaded directly from the IVR.
- § The information available on the website is promoted to all media outlets.
- § During a crisis all media enquires are managed by the Corporate Communications team.
- § The website is updated regularly with information as it comes to hand.
- § Corporate Communications attend ERL meetings to gather the most up to date information from Network and the field.

Corporate Communications then determines from the available facts the key messages and delivers them to the media via a variety of tools including: website; media releases; media statements; one-on-one phone enquiries and if deemed necessary through media conferences and appearances.

### 9.3 *Maintaining reliable, accurate and timely information on the ETSA Utilities' website.*

See response under recommendation 9.2

### 9.4 *The ability to call in additional call centre staff at short notice for extreme weather procedures to incorporate a requirement to notify the call centre of possible demands on a timely basis;*

ETSA Utilities' primary call centre function is provided by our sister company Powercor. The call centre is located in Bendigo. ETSA Utilities notifies the Bendigo call centre when we anticipate higher than normal call volumes due to an impending severe weather event. Bendigo responds by placing additional consultants/operators on standby to enable the call centre to cope with avalanche events.

Where the Bendigo call centre is overloaded or calls are not answered, calls then overflow to Powercor's Melbourne IVR and Call Centre. In extreme

situations, where both interstate call centres are overloaded or providing poor response times, ETSA Utilities will employ a 50 seat overload call centre at Keswick.

The Keswick Call Centre capability will be deployed should there be a major event whereby extended call wait times are being experienced and conditions indicate that the event will continue or escalate. Calls that cannot connect to the IVR will be overflowed to the Keswick Call Centre providing additional resources to manage fault identification and interruption information.

ETSA Utilities' staff who will be assisting with the handling of calls in these circumstances are currently undertaking Customer Service Training and training in OMS is being scheduled.

Status: Complete

**9.5 *Generating information (both for the Commission and for internal purposes) on call centre overload events;***

The required reporting functionality has been implemented and has the capability to record the number of calls to 131366 which are unsuccessful in connection. Reporting to a minimum of fifteen minute increments is available should this information be required.

Status: Complete

**9.6 *Appointment of depot liaison officers to the emergency management team.***

This role is performed by the CaMS Local Dispatcher and the CaMS Closeout Officer who report directly to CaMS Operations Managers. These Officers keep the Operations Manager apprised of the situation within local depots. The Operations Managers provide input to Manager Powerline Services (MPS) who is a member of the Emergency Management Team for status of resources and workloads in the local depot.

Status: Complete

**9.7 *The complete implementation of OMS and the connectivity model***

The Outage Management System went "live" in June 2006. The OMS is used to manage and control outages. The system enables grouping of customer calls into supply restoration jobs which are dispatched to field crews, which should assist in improving response times.

ETSA Utilities is continuing with the data capture process which is planned for completion in December 2006. This additional data will be incorporated into the OMS by April 2007.

ETSA Utilities is also using GPS (Global Position System) and its meter readers to create an improved link between customers' Meter Boxes and the distribution system which will improve the customer to asset link for use in the OMS. This will be incorporated into the connectivity model. However, the customer to asset link will never be 100% accurate so ETSA Utilities has incorporated this fact into our procedures under normal and avalanche conditions.

Status: Complete by April 2007.

### ETSA Utilities - Improvements implemented since the January Heatwave

This improvements listed below were initiated by ETSA Utilities as a result of the January Heatwave prior to ESCoSA releasing their Draft Heatwave Inquiry Report.

*EU.1 Providing wider dissemination of "Emergency Response Level" procedures to all relevant operational personnel and issue ETSA Utilities-wide alerts to forewarn relevant personnel of forecast emergency conditions.*

This is now a well developed procedure that is implemented by the Incident Coordinator (IC) and the Emergency Response Team. Review has been completed of relevant operational personnel and updated contact lists for dissemination of alerts.

Status: Complete

*EU.2 Developing new arrangements to maximize the number of personnel likely to make themselves available out of hours for extreme weather events.*

The Emergency Conditions Incentive Allowance is now established following consultation with the Unions. The allowance has been used in a recent event and enabled sufficient resources to be available to manage the event if it had escalated to a severe weather event.

Status: Complete.

*EU.3 Centralising procedures for sorting, managing and dispatching customer outage notifications in the Network Operations Centre.*

The new Avalanche Procedure as described under item 8.1 has been used and continuously improved based on subsequent usage.

Status: Complete

*EU.4 Implementing a Maximum Restoration Time Policy to include an outage time component which prioritises customers who face prolonged outages, including single customer outages and outages affecting small groups of customers to ensure that all customers are reconnected within an acceptable time.*

The policy is approved, implemented and together with the ETSA Emergency Procedures Manual, defines priorities for customer restoration and has been issued.

Status: Complete

*EU.5 Establishing procedures to enable ETSA Utilities to make contact with customers affected by long outages.*

ETSA Utilities currently contacts customers who reside in rural areas of South Australia should we be aware of difficulties with restoration and anticipate an extended timeframe for interruption to supply. This process has been in place for a period of six months and where contact details are available, proves successful.

Contact is hindered by the lack of customer to asset data which is currently being updated with data improvements expected by the end of the first quarter 2007 (but not assisted by Retailers' failure to update customer information via the B2B processes).

Where a major event occurs within the Adelaide Metropolitan area, the initial focus of all staff is on information flows and timely restoration. Interruptions to supply are monitored closely to identify areas where customers should be notified of lengthy restoration periods. Such contact presents difficulties, firstly due to the larger customer numbers and secondly due to the limitation in obtaining accurate contact details.

In any event, ETSA Utilities uses its website to record information on outages, their current status and estimated restoration times. In addition, frequent use is made of media channels to disseminate up to date information. ETSA Utilities has also entered into an agreement with ABC Radio to broadcast supply interruption and update information in local areas, to ensure information in the community is accurate and current.

Whilst ETSA Utilities will adopt an "escalate and contact" policy, it must be noted that we are reliant on our customer information, provided by Retailers being accurate. In particular, difficulties are being experienced when attempting to obtain correctly formatted files from AGL. Action is continuing towards a resolution of this issue including a data reconciliation project to reconcile the major retailers' data with ETSA Utilities' data.

This reconciliation project will also assist in maintaining the accuracy of the data in the OMS and the payment of reliability GSLs.

Status: Complete