



This is a determination of the Energy & Water Ombudsman NSW under Clause 6 of the Constitution of the Energy & Water Ombudsman NSW scheme.

Introduction

This determination relates to a claim for compensation for damage to a computer and oven – Ms A and Mr C.

By way of introduction I wish to note that during its seven years of operation, EWON has dealt with a large number of complaints from customers in relation to claims for damage. Overall, this has proved to be a complex and difficult area.

There appears to be no certainty for electricity suppliers or customers in relation to responsibility/liability for damage caused by electricity incidents. Although NSW electricity providers generally incorporate into their customer contracts a position of no responsibility/liability for damage caused by electricity incidents, in practice they pay many claims by customers on an ex gratia, without prejudice basis.

Electricity providers have adopted different approaches to customer claims so that there is no consistency in response across NSW utilities.

It appears that insurance companies are increasingly excluding ‘electrical’ incidents from their coverage, and directing policy holders back to their electricity provider for redress.

As a result of these factors, the position regarding claims for customers is not clear.

It is worth noting that the Essential Services Commission of Victoria has issued a guideline about compensation of customers. This guideline has had the effect of significantly reducing the need for the Energy & Water Ombudsman (Victoria) to be involved in customer claims for compensation.

In my view there does not appear to be any sound reason for an inconsistent approach by electricity providers in NSW to customer claims for damage. We cannot see any competitive advantage to a different approach by companies, and it does not seem equitable for customers to be treated differently in relation to claims depending on the distribution area in which they live. We have called for discussion of these issues by relevant stakeholders, including electricity distributors, regulatory bodies, and consumer groups.

In the absence of any clear guidelines for customer claims in NSW, it has been left to my office to investigate claims which have been denied by distributors. My determination in individual matters does not create any precedent, but simply reflects an attempt to resolve each case in relation to its individual circumstances.

I believe that the development of standards for claims in NSW will benefit customers, their electricity providers, and the general community.

The Complaint

Ms A and Mr C lodged a claim for compensation to their electricity supplier for damage to their computer and oven following an interruption to their electricity supply on 4 November 2004.

In her Claim Form dated 11 November 2003 which she submitted to her supplier on behalf of Mr C and herself, Ms A advised that at approximately 12 noon on 4 November 2003, while the supplier was installing a new power pole in their street, the power to her home was interrupted. Both she and Mr C were at home and Mr C was working on his computer. The oven was also in use at the time. Ms A noted that “many different explosions throughout the street” accompanied the disruption to their power supply. She further advised that when Mr C examined the fuse box, “*the cover was blown off and hanging by one catch*”. When Mr C asked the field staff how long the power would be out, they informed him that the interruption would last for approximately 15 minutes. However, the interruption lasted for around 90 minutes. When the power was restored, the customers discovered that the computer and oven were no longer working. Ms A subsequently submitted a claim to the supplier for \$2,920.50 comprising \$236.50 for the repair of their oven and \$2,684.00 for the replacement of their computer, which their repairer had assessed as being beyond repair.

In their claim determination letter dated 8 December 2003, the supplier informed the customers that their investigation had established that their premises “*experienced an unplanned supply interruption on 4 November, 2003 due to a tree branch falling on overhead mains*”. The supplier noted that in such circumstances [that is, events outside their reasonable and practical control] it is not their policy to make offers of compensation.

In their second letter to Ms A and Mr C dated 18 December 2003, the supplier acknowledged that they had reviewed their claim determination decision at the customers’ request and provided additional information relating to their decision to stand by the denial of the claim. The supplier informed the customers that they had established that “*a pole changeover was undertaken in your street on 4 November 2003. However, investigations into this matter have not disclosed any unusual occurrence associated with this pole changeover (such as surge, loss of phase or overvoltage)*”.

The supplier further noted that their records confirmed “*a loss of phase at your immediate distribution substation on 4 November 2003 at approximately 12.30pm*”. However, they stated that this incident was unrelated to the pole changeover in the street on that date and “*was due to a tree branch falling on mains*”. The supplier reiterated that in circumstances such as these, they do not make offers of compensation.

Ms A wrote to EWON on 2 February 2004 requesting an independent review of the decision. She stated that the power supply to her home was interrupted on 4 November 2004 when a team was installing a new pole close to her home. She expressed her concern that the supplier had not issued a notice of interruption to residents prior to commencing this work.

Ms A also informed EWON that supply to her home “*was interrupted when staff were moving electrical wires from the old telegraph pole onto the new pole. One of the electricity wires ended up wrapped around other electricity wires outside [the customers’ premises]. This caused the power interruption, resulting in several explosions throughout the street*”. Immediately following the supply interruption, Mr C asked an employee of the supplier if he needed to move their car from where it was parked on the roadway, as the electricity wire “*was dangling approx. 1-2 metres from our car.*” Ms A stated in her letter that one of the field crew working on the pole installation informed Mr C that they had made an error while carrying out the work.

Ms A informed EWON that Mr C spoke with the supplier on “*numerous occasions*” about their claim and noted that “*the final letter and conversation with [the company] on 18 December 2003 (approx) indicated that the power interruption was due to a tree branch falling on the wires and that our claim had been denied*”. She included with her letter to EWON a “*Record of Incident*” signed by seven other residents of her street who were at home at the time of the incident on 4 November 2003 who “*can verify that the power interruption was due to the negligence of [the company] staff and not a tree branch*”. Ms A also provided EWON with a series of photographs which, she stated, were taken after the incident and which indicate that “*there are no trees overhanging the electricity wires*”.

The Supplier’s Response

In their *Investigation Report* to EWON dated 8 March 2004, the supplier advised they were carrying out work in [the customers’ street] on 4 November 2003 “*to change over a Low Voltage pole*”. The company also noted that at approximately 12:30pm that day “*a redundant steel lighting main was being removed from the pole. During the process the ‘come-along’ device that was securing the cable was fouled by an adjacent tree, causing it to release the grip on the cable allowing it to fall. ...The fallen wire was removed and the fuse replaced by a Field Operator at 1:06pm*”.

The company’s *Investigation Report* also indicated that although 14 customers experienced a power interruption, Ms A and Mr C were the only ones to lodge a claim. The company advised that the customers’ claim was originally denied on the basis of a supply fault “*due to a tree branch on the mains*” and that this was the cause noted on their System Outage report.

However, the company informed EWON that *“this report has subsequently been found to be incorrect”* and that *“the interruption to supply was caused by the unexpected malfunction of equipment and resulted in a fuse operation on a 415V distributor due to a cable contacting live mains”*.

The company stated *“there were no explosions associated with this incident...no information to support the customers’ claims that the cover of the meter box was blown off by the incident”*. They also noted that: *“there is no information of any wiring damage as would be expected for a fault condition significant enough to blow the door off the meter box”*, and *“there was no damage caused to the street lights in the area as claimed by the customers”*.

The company further advised that their investigation indicated that although the customers were affected by a short interruption to supply, *“there is no indication of any associated ‘power surge’ as a result of this incident”*. They also stated that there is *“no evidence to indicate that staff were negligent in any way in carrying out the change-over”* and *“there were no other claims made by customers in the area as a result of this event”*.

In a telephone discussion with EWON on 12 May 2004, the company reiterated their previous advice in their EWON Investigation Report dated 8 March 2004 that notification to residents regarding the work carried out on 4 November 2003 was not required because they *“only need to advise customers [of any work conducted] if they intend to interrupt supply”* and *“75% of work conducted by [the company] does not require notification”*. The company also noted that prior to commencing this planned work their field staff *“would have completed a ‘pre-work safety check’ or safety audit to assess the potential risks [for example, the potential risk of a fallen tree]”*. However, the company further noted that their records did not indicate that any such risks had been identified prior to the work commencing.

Investigation by EWON

In the course of our investigation of this matter we considered in detail the following:

- information provided by Ms A and Mr C
- information provided by the supplier
- information provided by Ms A and Mr C’s computer technician
- Information provided by Ms A and Mr C’s oven repairer
- a report provided to EWON by an independent electrical engineer.

Technical Advice

Information provided by the customers’ repairers

In his report dated 25 November 2003, the customers’ computer technician noted that his inspection of their computer established that the computer was irreparably damaged as a result of the power interruption on 4 November 2003. The computer technician concluded that *“the surge damaged the power supply and some circuitry components including the motherboard and hard drive, and due to the age of the computer [5 years old], it is beyond economical repair. I recommend the DELL Dimension 4600 as a replacement computer at a cost of \$2,684.00 (including GST)”*.

In the course of EWON's investigation, the customers' computer technician confirmed that the computer did not have a surge protector. However, he emphasised that even though a surge protector might have helped avoid serious damage, this might not have been enough to avoid damage caused by a significant surge. He also noted that if the power supply had been the only component damaged, the computer could have been repaired. However, because the motherboard was also damaged, *"it was not worth repairing the computer"* and in the technician's assessment, *"it was much more economical to replace it with a new one"*.

In a report dated 10 November 2003, the customers' oven repairer noted that his inspection confirmed that the oven fan motor was not working following the power interruption on 4 November 2003 and that he recommended this be replaced at a cost of \$236.50 (inclusive of parts and labour).

Independent Technical Advice commissioned by EWON

EWON obtained independent technical advice from a qualified and experienced electrical engineer about the events leading to the outage and the relationship (if any) between the nature of the network event and the damage sustained by the customers' equipment.

The expert concluded that the interruption to the customers' electricity supply on 4 November 2003 was *"unplanned and inadvertent"*. He noted that when the field staff lost control of the conductor during the "live" work pole changeover procedure *"there would certainly have been at least one audible explosion when the short circuit occurred"*, and though not related to the customers' understanding that the street lights had exploded, in his assessment, *"there would have been several explosions"*.

Furthermore, when this occurred, *"the energy released by the short circuit on the low voltage reticulation system, which was protected by a 400 amp fuse, was quite substantial."* This was *"more than enough to cause a loud explosion accompanied by a powerful electric arc or flash"*. He further noted that due to the substantial electromagnetic forces caused by the fault current *"the short-circuited conductors would undoubtedly have moved and danced about quite violently, with every possibility that they would make contact with each other several times (attended each time by another explosion) over the period of several seconds before the fuse operated"*. EWON's technical expert stated that the issue of whether or not there were explosions in the street on 4 November 2003 *"is highly material to the claim since this is an indication of the likelihood of one or more transient overvoltage events on the system"*. Also, given that the issue of whether there was a system event on this day is not in dispute it appears that *"as a minimum a supply interruption was caused by a short circuit on the low voltage mains in the street"*. Although the company have indicated there is no record of any explosions, in his view such explosions *"would almost certainly have occurred"*.

EWON's technical expert noted information from the customers that one of the staff working on the pole installation had told them that they had made an error while carrying out the planned work. He noted that such an observation *"is likely to be true"* and emphasised that *"the workers did in fact make a mistake, in losing control of the conductor which then caused the short circuit"*.

In addition, photographs of the work site provided by the customers show “*the presence of trees generally in the street including adjacent to the low voltage mains, though it appears that there are no trees in the immediate vicinity of the pole, which was being changed over on 4 November 2003*”. He further noted that it is not clear “*how the device holding the offending conductor might have become dislodged through being fouled by an adjacent tree, as advised by [the company]*”.

Regardless of any pre-work risk assessment that may or may not have been carried by the staff, EWON’s technical expert noted that “*the fact remains that the workers did, for whatever reason, lose control of a conductor during what was, or should have been, a routine operation*” and this was “*clearly an error by personnel which simply should not have occurred*”. This error resulted in a “*short circuit of the low voltage mains supplying the street and hence the claimants’ premises*”. On this basis, the expert has concluded that this incident was not beyond the reasonable and practical control of the supplier.

Nature of the damage to the customers’ equipment

EWON’s technical expert concluded that the damage to the customers’ computer (which included damage to the motherboard and hard drive) is “*very much consistent with the effect of a transient overvoltage - a substantial voltage surge of very short duration*”. He also considered in detail the nature of the damage to the customers’ oven particularly as the customers’ oven repairer had indicated that in his experience an outage or power surge would not normally result in this kind of damage. EWON’s technical expert stated that “*it is probable in this case that the damage was caused by a voltage surge*” and that this “*probable overvoltage event was likely to have been of sufficient severity to damage an oven fan motor if the insulation of the motor had aged sufficiently and if it was on at the time*”. He made the following points in support of this view:

“The failure mode of the claimants’ oven fan motor is not known. The repairer has no record – or recollection – of just what was wrong with the motor when it was replaced on 11 November. Essentially (and consistent with the repairer’s experience) these motors can fail electrically – normally a winding failure – or mechanically – normally seized bearings. Obviously if the failure was mechanical, no link can be established with the supply system disturbance at 12:30 p.m., but this is not known. However in this case it seems an extraordinary coincidence that the motor should fail at the time of a significant electrical supply disturbance, which almost certainly involved application of transient overvoltage.”

Relationship between the incident on the network and the damage to the customers’ equipment

Regarding the causal link between the actions of the supplier’s staff on 4 November 2003 and the damage to the customers’ electrical equipment, EWON’s technical adviser has emphasised that:

“There appears to be a very direct link between the failure of the customers’ equipment and the event on the network”.

Furthermore, the failure of the customers' equipment "*is consistent with a voltage event generated externally to the equipment*" and it is "*extremely unlikely that the customers' computer failed for any reason other than the (probable) transient overvoltage event*". Although there is a possibility that the age of the oven [10 years old] may have resulted in the oven fan motor failing at any time, in this case, "*it did in fact fail at the time of the system event*".

In relation to the failure of the customers' computer "*the relationship between the failure and the system event (the short circuit and consequent highly probable transient overvoltage) is very strong, due to the susceptibility of computers to this type of supply system event and the failure mode of the computer*".

The relationship between the failure of the customers' oven and the system event also appears to be very strong and "*while such devices are much less susceptible than, say, computers, to a system event of this type, this is nonetheless a possible - or even probable - cause of failure*".

The technical expert stated that "*regardless of whether or not (a) [the company] personnel carried out a pre-work risk assessment and (b) whether or not the equipment they used to secure the redundant street lighting conductor that was being removed was defective or fouled by a tree, it is clear that the short circuit event (including, as is highly probable, a transient overvoltage event) was caused by an error by [the company] personnel while changing over the pole*". It also appears that personnel "*lost control of the conductor which then caused a short circuit on the low voltage mains supplying the street, leading to the events described above and (arguably, but in all probability) the damage to the claimants' electrical equipment*". Given this situation, the technical expert concluded that this incident was within the supplier's reasonable and practical control and that the causal link between the supply incident, which appears to have resulted from the actions of personnel on 4 November 2003, and the damage sustained by the customers' computer and oven "*appears to be compelling*". His report also stated that it seems extremely likely that the equipment failures were caused by the "*transient overvoltage event and not when the supply was restored 36 minutes later*."

Analysis

EWON's investigation considered the information obtained from all sources listed above.

There is agreement that an incident occurred which interrupted supply on the low voltage network in [the customers' street] between 12 noon and 12.30pm on 4 November 2003. However, there is disagreement as to the specific circumstances that led to this interruption to supply. The company initially denied the customer's claim on the basis that a tree branch had fallen on overhead mains. The company subsequently advised that this report had been found to be incorrect. The company maintains that the interruption to the customers' supply was caused by the unexpected malfunction of their equipment, resulting in a fuse operation on a 415V conductor due to a cable contacting live mains. The company have stated that:

- (i) *there is no indication that the customers' installation experienced a surge, loss of phase or overvoltage, and*
- (ii) *there is no information to indicate that staff were negligent in any way in changing the pole carrying low voltage mains in [the area] on 4 November 2004.*

EWON's technical expert has noted that "*irrespective of any pre-work risk assessments that may or may not have been carried out by workers, and notwithstanding any precautions that may have been undertaken by them, the fact remains that the workers did, for whatever reason, lose control of a conductor during what was, or should have been, a routine operation*". He has also emphasised that this supply incident did not result from circumstances that were beyond the reasonable and practical control of the supplier. Rather, in his assessment, the incident that resulted in the supply interruption "*was clearly an error by personnel which simply should not have occurred*". The failure of the customers' equipment and the event on the network "*can in all probability be directly linked*" and it appears that the nature of the damage sustained by the customers' equipment is consistent with "*an overvoltage event generated externally to the equipment.*"

Given this information, it seems reasonable to conclude that the company had responsibility for the supply event which resulted in the failure of the customers' equipment. Therefore, it seems appropriate for the company to compensate Ms A and Mr C for their loss.

Conclusion

Given the available information, EWON is not in a position to comment further on the technical aspects of the claim. However, in a situation where there is credible technical information to support the position of Ms A and Mr C, I believe it is reasonable for the benefit of any doubt to go to the customers.

Under the provision of Clause 6 of the *Constitution of the Energy & Water Ombudsman NSW* scheme I therefore determine that the company should pay the sum of \$3,000.00 to Ms A and Mr C as full settlement of their claim. This amount consists of the quoted replacement cost of their computer equipment and the cost of the repair to their oven plus a small customer service payment acknowledging the delay that has occurred in resolving their complaint.

Under the EWON Constitution, this decision is binding on the company. Ms A and Mr C may elect within twenty-one days whether or not to accept this decision.

If Ms A and Mr C accept the decision, they will fully release the company from all claims, actions, etc in relation to this complaint. In the event that Ms A and Mr C do not accept my decision, they may pursue their remedies in any other forum they may choose, and the company is then fully released from the decision.

Clare Petre
Energy & Water Ombudsman NSW
4 October 2005